

# EXHIBIT 1

**IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF TEXAS  
WACO DIVISION**

CUTTING EDGE VISION, LLC,

*Plaintiff,*

v.

T-MOBILE US, Inc., and T-MOBILE USA, Inc.

*Defendants.*

Case No. 6:24-cv-270-AM-DTG

**JURY TRIAL DEMANDED**

**EXPERT DECLARATION OF DR. ANDREW WOLFE**

## **I. INTRODUCTION**

I, Dr. Andrew Wolfe, state and declare as follows:

1. I have been retained by Defendants T-Mobile US, Inc. and T-Mobile USA, Inc. In this declaration, for convenience, I refer to these separate entities as T-Mobile.

2. I am submitting this declaration to explain technical issues raised in T-Mobile's Opening Claim Construction Brief.

## **II. BACKGROUND AND EDUCATION**

3. My qualifications and professional experience are described in my curriculum vitae, a copy of which is provided as Exhibit A. The following briefly summarizes my relevant qualifications and professional experience.

4. I have more than 40 years of experience in consumer electronics and interactive graphics and interactive video computer systems, including as a computer architect, computer system designer, PC graphics designer, educator, and as an executive in the consumer electronics business. I have also taught at some of the world's leading institutions in those fields, including Stanford University, Princeton University, Carnegie Mellon University, and Santa Clara University.

5. In 1985, I earned a B.S.E.E. degree in Electrical Engineering and Computer Science from the Johns Hopkins University. In 1987, I received an M.S. degree in Electrical and Computer Engineering from Carnegie Mellon University and then in 1992, I received a Ph.D. in Computer Engineering from Carnegie Mellon University. My doctoral dissertation proposed a new approach for the architecture of a computer processor.

6. In 1983, I began designing microprocessor-based computer systems and I/O cards for personal computers as a senior design engineer for Touch Technology, Inc. In some of these

design projects, I designed interrupt-based I/O cards for PC-compatible computer systems including the IBM PC-AT to interface interactive touch-based computer terminals that I designed for use in public information systems. I later worked for the Carroll Touch division of AMP where I designed additional touchscreen technologies, developed system firmware, and designed the company's first custom integrated circuit. I designed the touch/pen input system for the Linus WriteTop, which many believe to be the first commercial tablet computer.

7. From 1986 through 1987, I designed and built a high-performance computer system at Carnegie Mellon University. From 1986 through 1988, I also developed the curriculum and supervised the teaching lab for the processor design courses.

8. In 1987-88, I worked as a senior design engineer for ESL-TRW Advanced Technology Division. I designed and built a bus interface and memory controller for a workstation-based computer system and worked on the design of a multiprocessor system.

9. At the end of 1989, along with some partners, I reacquired the technology I had developed at Touch Technology and at AMP and founded The Graphics Technology Company. As an officer and a consultant, I managed engineering development activities at that company and personally developed dozens of interactive graphics and interactive video computer systems over the next seven years. Each of these included touch-based user interfaces and many included server-based data communications.

10. I have consulted, formally and informally, for a number of consumer electronics design companies. In particular, I have served on the technical advisory boards for two media processor design companies, BOPS, Inc., where I chaired the board, and Siroyan Ltd. I served in a similar role for three networking chip companies, Intellon, Inc., Comsilica, Inc., and Entridia, Inc. and one 3D game accelerator company, Ageia, Inc. I have also served as a technology advisor

to Motorola and to several venture capital funds in the U.S. and Europe. Currently, I am a director of Turtle Beach Corporation, providing guidance in its development of video game accessories and audio products.

11. From 1991 through 1997, I served on the Faculty of Princeton University as an Assistant Professor of Electrical Engineering. At Princeton, I taught undergraduate and graduate-level courses in Computer Architecture, Advanced Computer Architecture, Display Technology, and Microprocessor Systems courses as well as conducting sponsored research in the area of computer systems and related topics. I conducted DOD-sponsored research into client-server video streaming and supervised Ph.D. students working in this area. From 1999 through 2002, I also taught the Computer Architecture course to both undergraduates and graduate students at Stanford University several times as a Consulting Professor. At Princeton, I received several teaching awards, both from students and from the School of Engineering. I have also taught advanced microprocessor architecture to industry professionals in IEEE and ACM sponsored seminars.

12. From 1997 through 2002, I held a variety of executive positions at a publicly-held PC graphics company originally called S3, Inc. and later called Sonicblue Inc. These included Chief Technology Officer, Vice President of Systems Integration Products, Senior Vice President of Business Development, and Director of Technology. At the time I joined S3, it supplied graphics accelerators for more than 50% of the PCs sold in the United States.

13. In these roles, I managed teams of engineers developing complex graphics chips for use in personal computers. I also managed the video research lab. I supervised several engineering design teams that developed 2D/3D graphics chips for notebook PCs including digital video playback hardware. I was involved in every aspect of the relationship with PC manufacturers ranging from discussions of product requirements, testing and qualification procedures, and

competitive analysis, to market segmentation and pricing discussions. I met with senior executives in major PC manufacturers on numerous occasions to discuss business opportunities and general market trends. I also developed numerous consumer audio and video products including the Rio MP3 players, the ReplayTV digital video recorders, certain Löewe televisions, and the GoVideo DVD and VCR products. I also worked on the FrontPath series of Wi-Fi connected touchscreen tablets and the Diamond Mako touchscreen PDA. I developed and led the development and launch of numerous products that performed automatic and manual file synchronization including PDAs, music players, and video players. During my time at SonicBlue we launched more than 30 new consumer electronics products.

14. I have published more than 50 peer-reviewed papers in computer architecture and computer systems design including papers related to video streaming. I have also chaired IEEE and ACM conferences in microarchitecture and integrated circuit design. I am a named inventor on at least fifty-seven U.S. patents and thirty-seven foreign patents, including on touchscreens, phone-based services, digital photography, and data synchronization and storage (including cost optimization). I am an IEEE Fellow and an IEEE Computer Society Distinguished Contributor.

15. I have been the invited keynote speaker at the ACM/IEEE International Symposium on Microarchitecture and at the International Conference on Multimedia. I have also been an invited speaker on various aspects of technology or the PC industry at numerous industry events including the Intel Developer's Forum, Microsoft Windows Hardware Engineering Conference, Microprocessor Forum, Embedded Systems Conference, Comdex, and Consumer Electronics Show as well as at Harvard Business School and the University of Illinois Law School. I have been interviewed on subjects related to computer graphics and video technology and the electronics industry by publications such as the Wall Street Journal, New York Times, LA Times, Time,

Newsweek, Forbes, and Fortune as well as CNN, NPR, and the BBC. I have also spoken at dozens of universities including MIT, Stanford, University of Texas, Carnegie Mellon, UCLA, University of Michigan, Rice, and Duke.

16. I am currently an Assistant Teaching Professor at Santa Clara University teaching courses on Embedded Systems, Real-Time Computing, IC design, Mechatronics, and Engineering Practice.

### **III. MATERIALS CONSIDERED AND COMPENSATION**

17. I am being compensated for time spent working on this case at my standard rate of \$750 per hour. My compensation does not depend on the outcome of this litigation.

18. In connection with rendering my opinions, I have relied on my education, training, and experience. I have also reviewed the following materials in addition to any documents cited herein:

- U.S. Patent Nos. 10,063,761 and 11,153,472 (the “Asserted Patents”).
- The file histories of the U.S. Patent Nos. 10,063,761 (CEV-0032562–0033231), 11,153,472 (CEV-0003757–0017548), and 9,936,116 (CEV-0033232–0033954).
- The Expert Declaration of Dr. Hughes dated December 12, 2022 from *Cutting Edge Vision, LLC v. TCL Technology Group Corporation et al.*, C.A. No. 6:22-cv-00285-ADA, Dkt. 45-1 (W.D. Tex.) (TMO\_CEV\_CC\_000028–TMO\_CEV\_CC\_000088).
- Plaintiffs’ Proposed Constructions dated January 3, 2025.
- Defendants’ Amended Preliminary Proposed Claim Constructions dated February 20, 2025.

#### **IV. LEGAL STANDARDS**

19. I am not a lawyer and T-Mobile's counsel have instructed me as to the applicable legal standards to apply in this declaration.

##### **A. Claim Construction**

20. I understand that the claims are to be interpreted according to the meaning they would have to a person of ordinary skill in the art as of the patent's priority date, considering the claims in view of the specification, the file history, and relevant background knowledge in the field.

21. For the purposes of this declaration, I do not disagree with the definition of a person of ordinary skill in the art set forth in Dr. Hughes's declaration. He states, "a person of ordinary skill in the relevant art would possess a Bachelor of Engineering degree or a Bachelor of Science degree in Engineering or Computer Science and, in addition, have approximately three or more years of related work experience." Hughes Decl. at ¶ 19 (TMO\_CEV\_CC\_000035). In my opinion higher education by way of advanced degrees in a related field could substitute for years of experience.

22. For the purposes of this declaration, I have applied that same date that Dr. Hughes did as the priority date for the '761 and '472 Patents, i.e., October 17, 2005. *See, e.g.*, Hughes Decl. at ¶ 21 (TMO\_CEV\_CC\_000036). I understand that Defendants may dispute this in the future, however, for the purposes of this declaration, I was instructed to use October 17, 2005, as the priority date.

23. Because the '761 and '472 Patents share the same substantive specification, references are generally to the '472 Patent, however, my opinions apply equally to the '761 Patent. I will provide citations to the '761 Patent for any issues unique to the '761 Patent.



24. In my opinion, at the time of the alleged inventions of the Asserted Patents, my qualifications and experience made me (at least) a person of ordinary skill in the art. Over the course of my career, and especially in the years approaching the 2005 time period, I frequently interacted with persons of ordinary skill in the art, so I am familiar with their knowledge and understanding of the technologies at issue.

25. I further understand that, when interpreting claims, claims are generally to be interpreted so that every term in the claim has meaning, and that meaning of a given claim term remains consistent across claims, while recognizing that a patentee can—when making its position clear—disclaim certain meanings that otherwise would attach.

26. I further understand that “intrinsic evidence” refers to the specification, file history, and prior art references that are cited and discussed during prosecution. I understand that the file history must be viewed in context. “Extrinsic evidence” consists of all evidence external to the patent and file history, including, for example, expert and inventor testimony, and dictionaries. I understand that while helpful, extrinsic evidence is typically less significant than intrinsic evidence in determining the meaning of claim language.

27. I further understand that patent claim terms are not limited to a specific embodiment disclosed in the specification, unless the patentee intends for the claims and the embodiments to be coextensive. I further understand that claim terms normally are not interpreted in a way that excludes embodiments disclosed in the specification.

## **B. Indefiniteness**

28. I understand that it is a requirement of the patent statute that the patent claims particularly point out and distinctly claim the subject matter that the patentee regards to be the invention. I understand that a patent claim is indefinite if, read in light of the specification, figures,

and prosecution history, it fails to inform persons skilled in the art about the scope of the invention with reasonable certainty.

**C. Means-Plus-Function Claims**

29. I understand that claim limitations may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof. Such limitations are commonly referred to as “means-plus-function” limitations.

30. I understand that means-plus-function limitations are construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

31. In determining whether a claim term is a “means-plus-function” term, the presence of the word “means” in the term creates a rebuttable presumption that it is a “means-plus-function” term. Conversely, the absence of the word “means” in the term creates a rebuttable presumption that it is not a “means-plus-function” term.

32. However, I also understand that the essential inquiry is not merely the presence or absence of the word “means” but whether the words of the claim are understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure. That is, the absence of the word “means” from a particular term does not automatically prevent that term from being construed as a means-plus-function term. Rather, a term that does not recite “means” will be treated as a means-plus-function term if it is demonstrated the claim term fails to recite sufficiently definite structure or else recites function without reciting sufficient structure for performing that function. In addition, I understand that generic terms such as “mechanism,” “element,” “device,” and other such words (sometimes called “nonce” words) that reflect nothing more than verbal constructs may be used in a manner equivalent to using the word “means” because they typically do not connote sufficiently definite structure and therefore may signal that

the subject term is a means-plus-function term. I understand that courts have determined that a claim that recites “a processor” or a “controller” for performing a particular function can be means-plus-function term depending upon the context.

33. I further understand that the construction of a means-plus-function term involves two steps. One must first determine the function of the term. The function usually comes after the phrase that gives rise to means-plus-function treatment of the term, which as explained below, does not necessarily begin with the word “means.” I understand that it is not proper to narrow or broaden the recited function, i.e., the function must include the limitations recited in the claim for that term. After determining the function, one must identify corresponding structure in the specification. I understand that a structure disclosed in the specification qualifies as corresponding structure if the specification or the file history clearly links or associates the structure to the function recited in the claim.

34. I understand that a means-plus-function term is indefinite if a person having ordinary skill in the art would be unable to recognize the structure in the specification and associate it with the corresponding function.

#### **D. Computer-Implemented Means-Plus-Function Terms**

35. For certain means-plus-function limitations, the corresponding structure may be a computer or microprocessor programmed to perform an algorithm. In those cases, I understand that that the disclosed structure is not the general-purpose computer alone. Rather, the structure is the general-purpose computer together with the disclosed algorithm, which renders it a special purpose computer.

36. Therefore, I understand that where the corresponding structure is a computer or microprocessor that is not used for a generic computer function, the disclosure of an algorithm is

required. An algorithm may be disclosed in many ways, for example, as a mathematical formula, in prose, as a flow chart, or in any way that provides sufficient structure.

37. I understand that where an algorithm is disclosed, sufficiency is based on whether the disclosed algorithm, from the viewpoint of a person of ordinary skill, is sufficient to define the structure and make the bounds of the claim understandable. However, where no algorithm is disclosed, that principle does not apply. In addition, the disclosure is insufficient if it is purely functional or merely restates the function associated with the means-plus-function term. Further, I understand that the patentee cannot avoid the requirement to disclose an algorithm by arguing that a person of ordinary skill could develop algorithmic means to perform the claimed function.

38. Further, I understand that an algorithm may not be necessary in certain circumstances where the disclosed function is coextensive with the structure of a general-purpose computer, that is, where the function can be performed by a general-purpose computer without special programming. In determining whether or not special programming is necessary, the simplicity or complexity of the function or the programming necessary to implement it do not matter. If any programming is necessary, disclosure of an algorithm is required.

## **V. THE '472 AND '761 PATENTS**

39. U.S. Patent No. 10,063,761 (the “’761 Patent”) and U.S. Patent No. 11,153,472 (the “’472 Patent”) (Collectively, the “Asserted Patents”) are titled “Automatic Upload of Pictures from a Camera.” The Asserted Patents share a substantially similar specification.<sup>1</sup>

40. The asserted claims are directed to a “camera system” comprising a controller configured to confine automatic uploads of pictures over a cellular network to periods “without

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<sup>1</sup> Due to the similarities, I provide references to the ’472 Patent unless otherwise noted.

potential cellular network access fees” (’761 Patent, Claim 1) or to periods “without potentially increased cellular network access fees” (’472 Patent, Claims 1 and 5).

#### **A. Asserted Claims**

41. I understand that Claims 1–4 and 16 of the ’761 Patent and Claims 1, 2, 5, and 6 of the ’472 Patent are asserted here.

42. Claims 1–4 and 16 of the ’761 Patent are set forth below:

1. A camera system comprising:

- (a) a lens;
- (b) a cellular interface;
- (c) an image sensor configured to take pictures;
- (d) a non-volatile local memory configured to store one or more pictures;
- (e) a touch sensitive display;
- (f) a controller configured to:
  - (i) receive, via the touch sensitive display, a user selection of an upload option that instructs the device to confine automatic picture upload to periods without potential cellular network access fees;
  - (ii) automatically connect to a remote picture hosting service and cause an upload of one or more pictures stored in the non-volatile memory to the remote picture hosting service via the cellular interface, after receiving:
    - (1) data from the cellular interface used by the controller to determine that the upload is allowed based on the selected upload option,
    - (2) an indication that the system is connected to the internet via the cellular interface; and
    - (3) an indication from the local memory that a user has elected an option to designate at least one picture from the group of pictures stored in the local memory to be uploaded to the remote picture hosting service.

2. The camera system of claim 1 wherein the remote picture hosting service is associated with an email account.

3. The camera system of claim 1 further comprising:

(g) a voice recognizer (1) coupled to and configured to receive and process sounds transduced by at least one microphone, and (2) configured to recognize one or more words associated with an operation for the camera;

(h) the controller further configured to cause the camera to perform the operation associated with the one or more words recognized by the voice recognizer.

4. The camera system of claim 1, wherein the remote picture hosting service includes printing services.

16. The camera system of claim 1 wherein the controller is configured to cause uploaded pictures to thereafter be transmitted to another party.

43. Claims 1, 2, 5, and 6 of the '472 Patent are set forth below.

1. A camera system comprising:

(a) a lens;

(b) a cellular interface;

(c) an image sensor that is coupled to the lens and operable to capture pictures;

(d) a non-volatile local memory that is coupled to the image sensor and operable to store pictures captured by the image sensor;

(e) a touch sensitive display;

(f) a controller coupled to the cellular interface, the non-volatile local memory and the touch sensitive display, and configured to:

(i) receive, via the touch sensitive display, a user selection of an upload option that instructs the camera system to confine automatic picture upload to periods without potentially increased cellular network access fees;

(ii) automatically connect to a picture hosting service that is internet-based and enable an upload to the picture hosting service, over the internet and via the cellular interface, of a group of image sensor-captured pictures stored in the local memory, during any period detected by the controller in which all three of the following conditions are met:

(1) the upload is allowed because the system is within one of the periods without potentially increased cellular network access fees, as determined using data from the cellular interface,

(2) the system is connected to the internet via the cellular interface; and

(3) at least one image sensor-captured picture stored in the local memory has been designated through the touch sensitive display as part of the group of pictures to be uploaded to the picture hosting service.

2. The camera system of claim 1, wherein the picture hosting service includes printing services.

5. A camera system comprising:

(a) a lens;

(b) a cellular interface;

(c) an image sensor that is coupled to the lens and operable to capture pictures;

(d) a non-volatile local memory that is coupled to the image sensor and operable to store pictures captured by the image sensor;

(e) a touch sensitive display;

(f) a controller coupled to the cellular interface, the non-volatile local memory and the touch sensitive display, and configured to:

(i) display on the touch sensitive display a user-selectable input that instructs the camera system to confine automatic picture upload to periods without potentially increased cellular network access fees;

(ii) automatically connect to a picture hosting service that is internet-based and enable an upload to the picture hosting service, over the internet and via the cellular interface, of a group of image sensor-captured pictures stored in the local memory, during any period detected by the controller in which all the following conditions are met:

(1) the controller has received from the display a selection of the user-selectable input that instructs the camera system to confine automatic picture uploads to periods without potentially increased cellular network access fees;

(2) the controller has confirmed that the camera system is within a period without potentially increased cellular network access fees, as determined using data from the cellular interface;

(3) the system has a connection to the internet via the cellular interface; and

(4) at least one image sensor-captured picture stored in the local memory has been designated through the touch sensitive display as part of the group of image sensor-

captured pictures to be uploaded to the picture hosting service.

6. The camera system of claim 5, wherein the picture hosting service includes printing services.

**B. File Histories**

44. I have reviewed the file histories of the '472 and '761 Patents. I provide a brief summary below.

**i. '761 Patent File History**

45. Below is a summary based on my understanding of the file history of the '761 Patent (CEV-0032562–0033231).

46. The application leading to the '761 Patent was filed on November 24, 2015. On the same day, the claims were amended as follows:



1 – 20. (Canceled)

21. (New) A camera system comprising:

- (a) a lens;
- (b) a WIFI interface;
- (c) an image sensor configured to take pictures;
- (d) a non-volatile memory configured to store one or more pictures;
- (e) a touch sensitive display configured to display:
  - (1) a user-selectable menu option to designate one or more pictures stored in the non-volatile memory to be uploaded to a remote picture hosting service; and
  - (2) a user-selectable menu option to enable a controller to automatically connect to the remote picture hosting service and upload designated pictures stored in the non-volatile memory via the WIFI interface;
- (f) the controller configured to automatically connect to the remote picture hosting service and cause an upload of one or more pictures stored in the non-volatile memory to the remote picture hosting service via the WIFI interface, after predetermined conditions are met, the predetermined conditions including receiving:
  - (1) an indication that the menu options of elements (e)(1) and (e)(2) have been enabled; and
  - (2) an indication that the system is connected to the internet via the WIFI interface.

22. (New) The camera system of claim 21 further comprising:

- (g) a wireless cellular interface;
- (h) the touch sensitive display further configured to display a user-selectable menu option to enable the controller to automatically connect to the remote picture hosting service and upload designated pictures stored in the non-volatile memory via the wireless cellular interface;
- (i) the controller further configured to automatically connect to the remote picture hosting service and cause an upload of one or more pictures stored in the non-volatile memory to the

remote picture hosting service via the wireless cellular interface, after predetermined conditions are met, the predetermined conditions including receiving:

- (1) an indication that the menu options of elements (e)(1) and (h) have been enabled;  
and
- (2) an indication that the system is connected to the internet via the wireless cellular interface.

23. (New) The camera system of claim 21 wherein the remote picture hosting service is associated with an email account.

24. (New) The camera system of claim 21 further comprising:

- (g) a voice recognizer (1) coupled to and configured to receive and process sounds transduced by at least one microphone, and (2) configured to recognize one or more words associated with an operation for the camera;
- (h) the controller further configured to cause the camera to perform the operation associated with the one or more words recognized by the voice recognizer.

25. (New) The camera system of claim 21, wherein the remote picture hosting service includes printing services.

26. (New) The camera system of claim 21 further comprising a camera body and a stylus housed within the camera body.

27. (New) The camera system of claim 21, wherein the controller is further configured with a picture editor for creating and storing a picture sequence file in the non-volatile memory, the picture sequence file comprising:

- (1) a first picture taken with the image sensor and stored in the non-volatile memory;
- (2) a second picture taken with the image sensor and stored in the non-volatile memory;
- (3) data from a sound file downloaded via the WIFI interface and stored in the non-volatile memory.

28. (New) The camera system of claim 27, wherein the controller is further configured to upload the picture sequence file to the remote picture hosting service via the WIFI interface.

29. (New) The camera system of claim 21 wherein the controller is configured to receive a selection of specific pictures stored in the non-volatile memory to be uploaded to the remote picture hosting service.

30. (New) A camera system comprising:

(a) a lens;

(b) two or more network interfaces, including at least a WIFI interface and a wireless cellular interface;

(d) an image sensor configured to take pictures;

(e) a non-volatile memory configured to store one or more pictures;

(f) a touch sensitive display configured to display:

(1) a user-selectable menu option to designate one or more pictures stored in the non-volatile memory to be uploaded to a remote picture hosting service; and

(2) a user-selectable menu option to enable a controller to automatically connect to the remote picture hosting service and upload designated pictures stored in the non-volatile memory; and

(f) the controller configured to:

(1) automatically connect to the remote picture hosting service and cause an upload of one or more pictures stored in the non-volatile memory to the remote picture hosting service via one of the two or more network interfaces, after predetermined conditions are met, the predetermined conditions including receiving:

(i) an indication that the menu options of elements (e)(1) and (e)(2) have been enabled; and

(ii) an indication that the system is connected to the internet via at least one of the two or more network interfaces; and

(2) cause the upload to occur via the WIFI interface if the system is connected to the internet via both the WIFI interface and the wireless cellular interface.

31. (New) The camera system of claim 30 wherein the remote picture hosting service is associated with an email account.

32. (New) The camera system of claim 30 further comprising:

(g) a voice recognizer (1) coupled to and configured to receive and process sounds transduced by at least one microphone, and (2) configured to recognize one or more words associated with an operation for the camera;

(h) the controller further configured to cause the camera to perform the operation associated with the one or more words recognized by the voice recognizer.

33. (New) The camera system of claim 30, wherein the remote picture hosting service includes printing services.

34. (New) The camera system of claim 30 further comprising a camera body and a stylus housed within the camera body.

35. (New) The camera system of claim 30, wherein the controller is further configured with a picture editor for creating and storing a picture sequence file in the non-volatile memory, the picture sequence file comprising:

- (1) a first picture taken with the image sensor and stored in the non-volatile memory;
- (2) a second picture taken with the image sensor and stored in the non-volatile memory;
- (3) data from a sound file downloaded via one of the two or more interfaces and stored in the non-volatile memory.

36. (New) The camera system of claim 35, wherein the controller is further configured to upload the picture sequence file to the remote picture hosting service via one of the two or more interfaces.

37. (New) The camera system of claim 30 wherein the controller is configured to receive a selection of specific pictures stored in the non-volatile memory to be uploaded to the remote picture hosting service.

38. (New) A camera system comprising:

- (a) a lens;
- (b) two or more network interfaces, including at least a WIFI interface and a wireless cellular interface;
- (c) an image sensor configured to take pictures;
- (d) a non-volatile memory configured to store one or more pictures;
- (e) a touch sensitive display configured to display:
  - (1) a user-selectable menu option to designate one or more pictures stored in the non-volatile memory to be uploaded to a remote picture hosting service;
  - (2) a user-selectable menu option to enable a controller to automatically connect to the remote picture hosting service and upload designated pictures stored in the non-volatile memory via at least one of the network interfaces;
  - (3) a user-selectable menu option to enable the controller to automatically connect to a home computer and upload designated pictures stored in the non-volatile memory via the WIFI interface; and
- (f) the controller configured to
  - (1) automatically connect to the remote picture hosting service and cause an upload of one or more pictures stored in the non-volatile memory to the remote picture hosting service via at least one of the network interfaces, after predetermined conditions are met, the predetermined conditions including at least receiving:
    - (i) an indication that the menu options of elements (e)(1) and (e)(2) have been enabled;
    - (ii) an indication that the system is connected to the internet via either of the network interfaces to the remote picture hosting service;
  - (2) automatically connect to the home computer and cause an upload of one or more pictures stored in the non-volatile memory to the home computer via the WIFI

interface, after predetermined conditions are met, the predetermined conditions including at least receiving;

- (i) an indication that the menu options of elements (e)(1) and (e)(3) have been enabled;
- (ii) an indication that the system is connected to the home computer via the WIFI interface.

39. (New) The camera system of claim 38 further comprising:

(g) a voice recognizer (1) coupled to and configured to receive and process sounds transduced by at least one microphone, and (2) configured to recognize one or more words associated with an operation for the camera;

(h) the controller further configured to cause the camera to perform the operation associated with the one or more words recognized by the voice recognizer.

40. (New) The camera system of claim 38 further comprising a camera body and a stylus housed within the camera body.

Amendments to the Claims dated Nov. 24, 2015.

47. With the amendments, the applicant submitted remarks and provided “as Exhibit 1 a chart identifying representative support for the pending claims in the specification of issued U.S. Pat. No. 7,697,827, to which this application claims priority.” Preliminary Amendment dated Nov. 24, 2015 at 10.

**EXHIBIT I**

<b>Support for Claims in U.S. Pat. No. 7,697,827 (to which this application claims priority)</b>	
21. A camera system comprising: (a) a lens;	<i>See, e.g.</i> , 8:66-67: "Another application of this aspect of the invention uses the touchpad 62 to inform the camera system to zoom the lens..."
(b) a WIFI interface;	<i>See, e.g.</i> , 11:37-45: "In a second preferred embodiment of this aspect of the invention, the inventive camera system is equipped with software and hardware coupled to the camera controller 40 allowing independent communication with a computer network for the primary purpose of communicating its pictures over the internet. Currently preferred is WIFI which is typically connected by LAN, routers, etc. to the internet and which usually allows WIFI-equipped devices to independently connect to the internet."
(c) an image sensor configured to take pictures;	<i>See, e.g.</i> , 12:57-66: "The figure shows one embodiment of the system and the relationship between the camera controller 40, <b>camera CCD 54...</b> "
(d) a non-volatile memory configured to store one or more pictures;	<i>See, e.g.</i> , 12:57-66: "The figure shows one embodiment of the system and the relationship between the camera controller 40, camera CCD 54, AF motor (also referred to as auto focus 60 system) 48, zoom motor (also referred to as zoom) 46, <b>storage media 44...</b> "
(e) a touch sensitive display configured to display:	<i>See, e.g.</i> , 6:34-35: "Another aspect of the present invention provides that the camera LCD display 14 employs touch sensitive technology." <i>See also, e.g.</i> , 6:37-41: "This aspect of the present invention allows the user to interact with menus, features and functions displayed on the LCD display directly rather than through ancillary buttons or cursor control."
(1) a user-selectable menu option to designate one or more pictures stored in the non-volatile memory to be uploaded to a remote picture hosting service; and	<i>See, e.g.</i> , 12:6-38: "[T]he inventive camera system is operable <b>for being instructed to automatically initiate a connection to the internet</b> , LAN, printer, etc. whenever the predetermined conditions are met and it is in range of the network connection, (e.g., WIFI, Bluetooth, wireless USB, wired LAN, etc.)...[T]he inventive camera system automatically connects to the internet preferably via WIFI, although cellular network, etc. connection is also contemplated, when it has a predetermined number of pictures and can so connect, and will send the pictures to virtually any internet destination without user intervention. For example, the inventive camera system <b>can be instructed to automatically</b> send the pictures to an email account, <b>internet picture hosting site, web-based photo printing site</b> , the user's internet-connected home computer (when he is on vacation, for instance), etc. In this way, valuable pictures are immediately backed-up and the need for reliance on expensive camera storage media like flash cards, SD, etc. is greatly reduced."



	<p><i>See also, e.g., 6:37-41: "This aspect of the present invention allows the user to interact with menus, features and functions displayed on the LCD display directly rather than through ancillary buttons or cursor control."</i></p>
<p>(2) a user-selectable menu option to enable a controller to automatically connect to the remote picture hosting service and upload designated pictures stored in the non-volatile memory via the WIFI interface;</p>	<p><i>See, e.g., 12:6-38: "[T]he inventive camera system is operable for being instructed to automatically initiate a connection to the internet, LAN, printer, etc. whenever the predetermined conditions are met and it is in range of the network connection, (e.g., WIFI, Bluetooth, wireless USB, wired LAN, etc.)...[T]he inventive camera system automatically connects to the internet preferably via WIFI, although cellular network, etc. connection is also contemplated, when it has a predetermined number of pictures and can so connect, and will send the pictures to virtually any internet destination without user intervention. For example, the inventive camera system can be instructed to automatically send the pictures to an email account, internet picture hosting site, web-based photo printing site, the user's internet-connected home computer (when he is on vacation, for instance), etc. In this way, valuable pictures are immediately backed-up and the need for reliance on expensive camera storage media like flash cards, SD, etc. is greatly reduced."</i></p> <p><i>See also, e.g., 6:37-41: "This aspect of the present invention allows the user to interact with menus, features and functions displayed on the LCD display directly rather than through ancillary buttons or cursor control."</i></p>
<p>(f) the controller configured to automatically connect to the remote picture hosting service and cause an upload of one or more pictures stored in the non-volatile memory to the remote picture hosting service via the WIFI interface, after predetermined conditions are met, the predetermined conditions including receiving:</p> <p>(1) an indication that the menu options of elements (e)(1) and (e)(2) have been enabled; and</p> <p>(2) an indication that the system is connected to the internet via the WIFI</p>	<p><i>See, e.g., 12:6-38: "[T]he inventive camera system is operable for being instructed to automatically initiate a connection to the internet, LAN, printer, etc. whenever the predetermined conditions are met and it is in range of the network connection, (e.g., WIFI, Bluetooth, wireless USB, wired LAN, etc.)...[T]he inventive camera system automatically connects to the internet preferably via WIFI, although cellular network, etc. connection is also contemplated, when it has a predetermined number of pictures and can so connect, and will send the pictures to virtually any internet destination without user intervention. For example, the inventive camera system can be instructed to automatically send the pictures to an email account, internet picture hosting site, web-based photo printing site, the user's internet-connected home computer (when he is on vacation, for instance), etc. In this way, valuable pictures are immediately backed-up and the need for reliance on expensive camera storage media like flash cards, SD, etc. is greatly reduced."</i></p> <p><i>See also, e.g., 11:38-64: "[T]he inventive camera system is equipped with software and hardware coupled to the camera controller allowing independent communication with a computer network for the primary purpose of communicating its pictures over the internet. Currently preferred is WIFI which is typically connected by LAN, routers, etc. to the internet and which usually allows WIFI-equipped de-</i></p>



interface.	vices to independently connect to the internet....So equipped, <i>the inventive camera system can now independently upload its pictures to any of the internet-based photo printing services, such as those provided by Walmart.com, Walgreens.com, Kodak.com, etc., without the need for first storing the photos to a computer system and then connecting the computer system to the internet to upload the pictures.</i> "
22. The camera system of claim 21 further comprising: (g) a wireless cellular interface;	<p>See, e.g., 11:38-64: "[T]he inventive camera system is equipped with software and hardware coupled to the camera controller allowing independent communication with a computer network for the primary purpose of communicating its pictures over the internet. Currently preferred is WIFI which is typically connected by LAN, routers, etc. to the internet and which usually allows WIFI-equipped devices to independently connect to the internet. Alternatively, the invention contemplates the use of wired LAN, <i>cellular data networks</i>, etc. as the interconnection technology used by the inventive camera system."</p> <p>See also, e.g., 13:45-49: "The aspect of the invention allowing for automatic connection to a LAN or the internet is also contemplated for use with cell phone cameras. This aspect of the invention ameliorates the prior art storage space limitation which severely hampers the utility of the cell phone camera."</p>
(h) the touch sensitive display further configured to display a user-selectable menu option to enable the controller to automatically connect to the remote picture hosting service and upload designated pictures stored in the non-volatile memory via the wireless cellular interface;	<p>See, e.g., 12:6-38: "[T]he inventive camera system is operable <i>for being instructed to automatically initiate a connection to the internet</i>, LAN, printer, etc. whenever the predetermined conditions are met and it is in range of the network connection, (e.g., WIFI, Bluetooth, wireless USB, wired LAN, etc)...[T]he inventive camera system automatically connects to the internet preferably via WIFI, although <i>cellular network, etc. connection is also contemplated</i>, when it has a predetermined number of pictures and can so connect, and will send the pictures to virtually any internet destination without user intervention. For example, the inventive camera system <i>can be instructed to automatically</i> send the pictures to an email account, <i>internet picture hosting site, web-based photo printing site</i>, the user's internet-connected home computer (when he is on vacation, for instance), etc. In this way, valuable pictures are immediately backed-up and the need for reliance on expensive camera storage media like flash cards, SD, etc. is greatly reduced."</p>
(i) the controller further configured to automatically connect to the remote picture hosting service and cause an upload of one or more pictures stored in the non-volatile memory to the	<p>See, e.g., 12:6-38: "[T]he inventive camera system is operable for being instructed <i>to automatically initiate a connection to the internet</i>, LAN, printer, etc. <i>whenever the predetermined conditions are met and it is in range of the network connection</i>, (e.g., WIFI, Bluetooth, wireless USB, wired LAN, etc)...[T]he inventive camera system automatically connects to the internet preferably via WIFI, <i>although cellular network, etc. connection is also contemplated</i>, when it has a predetermined number of pictures and can so connect, and will</p>

<p>remote picture hosting service via the wireless cellular interface, after predetermined conditions are met, the predetermined conditions including receiving:</p> <p>(1) an indication that the menu options of elements (e)(1) and (h) have been enabled; and</p> <p>(2) an indication that the system is connected to the internet via the wireless cellular interface.</p>	<p>send the pictures to virtually any internet destination without user intervention. For example, the inventive camera system can be instructed <i>to automatically</i> send the pictures to an email account, <i>internet picture hosting site, web-based photo printing site</i>, the user's internet-connected home computer (when he is on vacation, for instance), etc. In this way, valuable pictures are immediately backed-up and the need for reliance on expensive camera storage media like flash cards, SD, etc. is greatly reduced."</p> <p><i>See also, e.g., 11:38-64: "[T]he inventive camera system is equipped with software and hardware coupled to the camera controller allowing independent communication with a computer network for the primary purpose of communicating its pictures over the internet. Currently preferred is WIFI which is typically connected by LAN, routers, etc. to the internet and which usually allows WIFI-equipped devices to independently connect to the internet. Alternatively, the invention contemplates the use of wired LAN, cellular data networks, etc. as the interconnection technology used by the inventive camera system.....So equipped, the inventive camera system can now independently upload its pictures to any of the internet-based photo printing services, such as those provided by Walmart.com, Walgreens.com, Kodak.com, etc., without the need for first storing the photos to a computer system and then connecting the computer system to the internet to upload the pictures."</i></p>
<p>23. The camera system of claim 21 wherein the remote picture hosting service is associated with an email account.</p>	<p><i>See, e.g., 12:32-38: "For example, the inventive camera system can be instructed to automatically send the pictures to an email account, internet picture hosting site, web-based photo printing site, the user's internet-connected home computer (when he is on vacation, for instance), etc. In this way, valuable pictures are immediately backed-up and the need for reliance on expensive camera storage media like flash cards, SD, etc. is greatly reduced."</i></p>
<p>24. The camera system of claim 21 further comprising:</p> <p>(g) a voice recognizer (1) coupled to and configured to receive and process sounds transduced by at least one microphone, and</p> <p>(2) configured to recognize one or more words associated with an operation for the camera;</p> <p>(h) the controller further</p>	<p><i>See, e.g., Abstract: "The voice recognition unit is operable for, among other things, receiving multiple different voice commands, recognizing the vocal commands, associating the different voice commands to one camera command and controlling at least some aspect of the digital camera operation in response to these voice commands."</i></p> <p><i>See also, e.g., 12:57-66: "The figure shows one embodiment of the system and the relationship between the camera controller 40, camera CCD 54, AF motor (also referred to as auto focus 60 system) 48, zoom motor (also referred to as zoom) 46, storage media 44, remote light sensor 66, buttons 64, touch pad device 62, lcd display 14, view finder 16, view finder sensors 68, gaze tracker 57, view finder use detector 58, wink detector 60, microphone 10d, microphone 10e,</i></p>

configured to cause the camera to perform the operation associated with the one or more words recognized by the voice recognizer.	<i>microphone 10f</i> , selection circuitry 59, <i>voice recognition unit 56</i> , and other camera control 50.”
25. The camera system of claim 21, wherein the remote picture hosting service includes printing services.	<p><i>See, e.g.</i>, 11:58-64: “So equipped, <i>the inventive camera system can now independently upload its pictures to any of the internet-based photo printing services, such as those provided by Walmart.com, Walgreens.com, Kodak.com, etc., without the need for first storing the photos to a computer system and then connecting the computer system to the internet to upload the pictures.</i>”</p> <p><i>See also, e.g.</i>, 12:32-38: “For example, the inventive camera system <i>can be instructed to automatically</i> send the pictures to an email account, <i>internet picture hosting site, web-based photo printing site</i>, the user’s internet-connected home computer (when he is on vacation, for instance), etc. In this way, valuable pictures are immediately backed-up and the need for reliance on expensive camera storage media like flash cards, SD, etc. is greatly reduced.”</p>
26. The camera system of claim 21 further comprising a camera body and a stylus housed within the camera body.	<i>See, e.g.</i> , 6:41-43: “For those embodiments of touch technology requiring use of a stylus, it is further contemplated that the camera body house the stylus for easy access by the user.”
27. The camera system of claim 21, wherein the controller is further configured with a picture editor for creating and storing a picture sequence file in the non-volatile memory, the picture sequence file comprising: (1) a first picture taken with the image sensor and stored in the non-volatile memory; (2) a second picture taken with the image sensor and stored in the non-volatile memory; (3) data from a sound file downloaded via the WIFI	<i>See, e.g.</i> , 12:44-54: “According to this aspect of the invention, the inventive camera records a series of images, (e.g., a movie) and then the user downloads an MP3 file (i.e., a sound file) from a network (e.g., internet) source to be associated with the movie taken so that when the movie is played, the MP3 file also plays. Alternatively, the MP3 content is embedded in the movie, either as is, or re-encoded. Additionally, the user may download other movie material or still images via the network connection for insertion in the camera-recorded movie or for the replacement of certain individual camera-taken “frames” in the movie.”

interface and stored in the non-volatile memory.	
28. The camera system of claim 27, wherein the controller is further configured to upload the picture sequence file to the remote picture hosting service via the WIFI interface	<i>See, e.g., 15-48-51: "Internet connectability is contemplated be used to download sound or image files for editing or for uploading video recorded for editing or remote storage of the video images."</i>
29. The camera system of claim 21 wherein the controller is configured to receive a selection of specific pictures stored in the non-volatile memory to be uploaded to the remote picture hosting service.	<i>See, e.g., 11:15-18: "The camera system preferably includes the ability for the user to indicate to the camera which pictures to offload so that the camera offloads only those pictures that are so indicated by the user."</i>
30. A camera system comprising:	<i>See, e.g., 8:66-67: "Another application of this aspect of the invention uses the touchpad 62 to inform the camera system to zoom the lens..."</i>
(a) a lens;	
(b) two or more network interfaces, including at least a WIFI interface and a wireless cellular interface;	<i>See, e.g., 11:37-47: "In a second preferred embodiment of this aspect of the invention, the inventive camera system is equipped with software and hardware coupled to the camera controller 40 allowing independent communication with a computer network for the primary purpose of communicating its pictures over the internet. Currently preferred is <b>WIFI</b> which is typically connected by LAN, routers, etc. to the internet and which usually allows WIFI-equipped devices to independently connect to the internet. Alternatively, the invention contemplates the use of wired LAN, <b>cellular data networks</b>, etc. as the inter-connection technology used by the inventive camera system."</i>
(d) an image sensor configured to take pictures;	<i>See, e.g., 12:57-66: "The figure shows one embodiment of the system and the relationship between the camera controller 40, <b>camera CCD 54</b>..."</i>
(e) a non-volatile memory configured to store one or more pictures;	<i>See, e.g., 12:57-66: "The figure shows one embodiment of the system and the relationship between the camera controller 40, camera CCD 54, AF motor (also referred to as auto focus 60 system) 48, zoom motor (also referred to as zoom) 46, <b>storage media 44</b>..."</i>
(f) a touch sensitive display configured to display:	<i>See, e.g., 6:34-35: "Another aspect of the present invention provides that the camera LCD display 14 employs touch sensitive technology."</i>



	<p><i>See also, e.g., 6:37-41: "This aspect of the present invention allows the user to interact with menus, features and functions displayed on the LCD display directly rather than through ancillary buttons or cursor control."</i></p>
<p>(1) a user-selectable menu option to designate one or more pictures stored in the non-volatile memory to be uploaded to a remote picture hosting service; and</p>	<p><i>See, e.g., 12:6-38: "[T]he inventive camera system is operable for being instructed to automatically initiate a connection to the internet, LAN, printer, etc. whenever the predetermined conditions are met and it is in range of the network connection, (e.g., WIFI, Bluetooth, wireless USB, wired LAN, etc.)....[T]he inventive camera system automatically connects to the internet preferably via WIFI, although cellular network, etc. connection is also contemplated, when it has a predetermined number of pictures and can so connect, and will send the pictures to virtually any internet destination without user intervention. For example, the inventive camera system can be instructed to automatically send the pictures to an email account, internet picture hosting site, web-based photo printing site, the user's internet-connected home computer (when he is on vacation, for instance), etc. In this way, valuable pictures are immediately backed-up and the need for reliance on expensive camera storage media like flash cards, SD, etc. is greatly reduced."</i></p> <p><i>See also, e.g., 6:37-41: "This aspect of the present invention allows the user to interact with menus, features and functions displayed on the LCD display directly rather than through ancillary buttons or cursor control."</i></p>
<p>(2) a user-selectable menu option to enable a controller to automatically connect to the remote picture hosting service and upload designated pictures stored in the non-volatile memory; and</p>	<p><i>See, e.g., 12:6-38: "[T]he inventive camera system is operable for being instructed to automatically initiate a connection to the internet, LAN, printer, etc. whenever the predetermined conditions are met and it is in range of the network connection, (e.g., WIFI, Bluetooth, wireless USB, wired LAN, etc.)....[T]he inventive camera system automatically connects to the internet preferably via WIFI, although cellular network, etc. connection is also contemplated, when it has a predetermined number of pictures and can so connect, and will send the pictures to virtually any internet destination without user intervention. For example, the inventive camera system can be instructed to automatically send the pictures to an email account, internet picture hosting site, web-based photo printing site, the user's internet-connected home computer (when he is on vacation, for instance), etc. In this way, valuable pictures are immediately backed-up and the need for reliance on expensive camera storage media like flash cards, SD, etc. is greatly reduced."</i></p> <p><i>See also, e.g., 6:37-41: "This aspect of the present invention allows the user to interact with menus, features and functions displayed on the LCD display directly rather than through ancillary buttons or cursor control."</i></p>
<p>(f) the controller configured to:</p>	<p><i>See, e.g., 12:6-38: "[T]he inventive camera system is operable for being instructed to automatically initiate a connection to the in-</i></p>

<p>(1) automatically connect to the remote picture hosting service and cause an upload of one or more pictures stored in the non-volatile memory to the remote picture hosting service via one of the two or more network interfaces, after predetermined conditions are met, the predetermined conditions including receiving:</p> <p>(i) an indication that the menu options of elements (e)(1) and (e)(2) have been enabled; and</p> <p>(ii) an indication that the system is connected to the internet via at least one of the two or more network interfaces; and</p>	<p>internet, LAN, printer, etc. <i>whenever the predetermined conditions are met and it is in range of the network connection</i>, (e.g., <i>WIFI</i>, Bluetooth, wireless USB, wired LAN, etc.)....[T]he inventive camera system automatically connects to the internet <i>preferably via WIFI, although cellular network, etc. connection is also contemplated</i>, when it has a predetermined number of pictures and can so connect, and will send the pictures to virtually any internet destination without user intervention. For example, the inventive camera system can be instructed <i>to automatically</i> send the pictures to an email account, <i>internet picture hosting site, web-based photo printing site</i>, the user's internet-connected home computer (when he is on vacation, for instance), etc. In this way, valuable pictures are immediately backed-up and the need for reliance on expensive camera storage media like flash cards, SD, etc. is greatly reduced."</p> <p><i>See also, e.g., 11:38-64: "[T]he inventive camera system is equipped with software and hardware coupled to the camera controller allowing independent communication with a computer network for the primary purpose of communicating its pictures over the internet. Currently preferred is WIFI which is typically connected by LAN, routers, etc. to the internet and which usually allows WIFI-equipped devices to independently connect to the internet. Alternatively, the invention contemplates the use of wired LAN, cellular data networks, etc. as the interconnection technology used by the inventive camera system.....So equipped, the inventive camera system can now independently upload its pictures to any of the internet-based photo printing services, such as those provided by Walmart.com, Walgreens.com, Kodak.com, etc., without the need for first storing the photos to a computer system and then connecting the computer system to the internet to upload the pictures."</i></p>
<p>(2) cause the upload to occur via the WIFI interface if the system is connected to the internet via both the WIFI interface and the wireless cellular interface.</p>	<p><i>See, e.g., 12:26-31: "[T]he inventive camera system automatically connects to the internet preferably via WIFI, although cellular network, etc. connection is also contemplated, when it has a predetermined number of pictures and can so connect, and will send the pictures to virtually any internet destination without user intervention."</i></p> <p><i>See also, e.g., 11:42-47: "Currently preferred is WIFI which is typically connected by LAN, routers, etc. to the internet and which usually allows WIFI-equipped devices to independently connect to the internet. Alternatively, the invention contemplates the use of wired LAN, cellular data networks, etc. as the interconnection technology used by the inventive camera system."</i></p>
<p>31. The camera system of claim 30 wherein the remote picture hosting service is associated with</p>	<p><i>See, e.g., 12:32-38: "For example, the inventive camera system can be instructed to automatically send the pictures to an email account, internet picture hosting site, web-based photo printing site, the user's internet-connected home computer (when he is on vacation,</i></p>

an email account	for instance), etc. In this way, valuable pictures are immediately backed-up and the need for reliance on expensive camera storage media like flash cards, SD, etc. is greatly reduced.”
32. The camera system of claim 30 further comprising: (g) a voice recognizer (1) coupled to and configured to receive and process sounds transduced by at least one microphone, and (2) configured to recognize one or more words associated with an operation for the camera; (h) the controller further configured to cause the camera to perform the operation associated with the one or more words recognized by the voice recognizer.	<p><i>See, e.g.,</i> Abstract: “The voice recognition unit is operable for, among other things, receiving multiple different voice commands, recognizing the vocal commands, associating the different voice commands to one camera command and controlling at least some aspect of the digital camera operation in response to these voice commands.”</p> <p><i>See also, e.g.,</i> 12:57-66: “The figure shows one embodiment of the system and the relationship between the camera controller 40, camera CCD 54, AF motor (also referred to as auto focus 60 system) 48, zoom motor (also referred to as zoom) 46, storage media 44, remote light sensor 66, buttons 64, touch pad device 62, lcd display 14, view finder 16, view finder sensors 68, gaze tracker 57, view finder use detector 58, wink detector 60, <b>microphone 10d</b>, <b>microphone 10e</b>, <b>microphone 10f</b>, selection circuitry 59, <b>voice recognition unit 56</b>, and other camera control 50.”</p>
33. The camera system of claim 30, wherein the remote picture hosting service includes printing services.	<p><i>See, e.g.,</i> 11:58-64: “So equipped, <b>the inventive camera system can now independently upload its pictures to any of the internet-based photo printing services, such as those provided by Walmart.com, Walgreens.com, Kodak.com, etc., without the need for first storing the photos to a computer system and then connecting the computer system to the internet to upload the pictures.</b>”</p> <p><i>See also, e.g.,</i> 12:32-38: “For example, the inventive camera system <b>can be instructed to automatically</b> send the pictures to an email account, <b>internet picture hosting site, web-based photo printing site</b>, the user’s internet-connected home computer (when he is on vacation, for instance), etc. In this way, valuable pictures are immediately backed-up and the need for reliance on expensive camera storage media like flash cards, SD, etc. is greatly reduced.”</p>
34. The camera system of claim 30 further comprising a camera body and a stylus housed within the camera body.	<i>See, e.g.,</i> 6:41-43: “For those embodiments of touch technology requiring use of a stylus, it is further contemplated that the camera body house the stylus for easy access by the user.”
35. The camera system of claim 30, wherein the	<i>See, e.g.,</i> 12:44-54: “According to this aspect of the invention, the inventive camera records a series of images, (e.g., a movie) and

controller is further configured with a picture editor for creating and storing a picture sequence file in the non-volatile memory, the picture sequence file comprising: (1) a first picture taken with the image sensor and stored in the non-volatile memory; (2) a second picture taken with the image sensor and stored in the non-volatile memory; (3) data from a sound file downloaded via one of the two or more interfaces and stored in the non-volatile memory.	then the user downloads an MP3 file (i.e., a sound file) from a network (e.g., internet) source to be associated with the movie taken so that when the movie is played, the MP3 file also plays. Alternatively, the MP3 content is embedded in the movie, either as is, or re-encoded. Additionally, the user may download other movie material or still images via the network connection for insertion in the camera-recorded movie or for the replacement of certain individual camera-taken “frames” in the movie.”
36. The camera system of claim 35, wherein the controller is further configured to upload the picture sequence file to the remote picture hosting service via one of the two or more interfaces.	<i>See, e.g.</i> , 15:48-51: “Internet connectability is contemplated be used to download sound or image files for editing or for uploading video recorded for editing or remote storage of the video images.”
37. The camera system of claim 30 wherein the controller is configured to receive a selection of specific pictures stored in the non-volatile memory to be uploaded to the remote picture hosting service.	<i>See, e.g.</i> , 11:15-18: “The camera system preferably includes the ability for the user to indicate to the camera which pictures to offload so that the camera offloads only those pictures that are so indicated by the user.”
38. A camera system comprising: (a) a lens;	<i>See, e.g.</i> , 8:66-67: “Another application of this aspect of the invention uses the touchpad 62 to inform the camera system to zoom the lens...”
(b) two or more network interfaces, including at	<i>See, e.g.</i> , 11:37:47: “In a second preferred embodiment of this aspect of the invention, the inventive camera system is equipped with



least a WIFI interface and a wireless cellular interface;	software and hardware coupled to the camera controller 40 allowing independent communication with a computer network for the primary purpose of communicating its pictures over the internet. Currently preferred is <i>WIFI</i> which is typically connected by LAN, routers, etc. to the internet and which usually allows WIFI-equipped devices to independently connect to the internet. Alternatively, the invention contemplates the use of wired LAN, <i>cellular data networks</i> , etc. as the inter-connection technology used by the inventive camera system."
(c) an image sensor configured to take pictures;	<i>See, e.g., 12:57-66: "The figure shows one embodiment of the system and the relationship between the camera controller 40, camera CCD 54...."</i>
(d) a non-volatile memory configured to store one or more pictures;	<i>See, e.g., 12:57-66: "The figure shows one embodiment of the system and the relationship between the camera controller 40, camera CCD 54, AF motor (also referred to as auto focus 60 system) 48, zoom motor (also referred to as zoom) 46, storage media 44...."</i>
(e) a touch sensitive display configured to display:	<i>See, e.g., 6:34-35: "Another aspect of the present invention provides that the camera LCD display 14 employs touch sensitive technology."</i> <i>See also, e.g., 6:37-41: "This aspect of the present invention allows the user to interact with menus, features and functions displayed on the LCD display directly rather than through ancillary buttons or cursor control."</i>
(1) a user-selectable menu option to designate one or more pictures stored in the non-volatile memory to be uploaded to a remote picture hosting service;	<i>See, e.g., 12:6-38: "[T]he inventive camera system is operable for being instructed to automatically initiate a connection to the internet, LAN, printer, etc. whenever the predetermined conditions are met and it is in range of the network connection, (e.g., WIFI, Bluetooth, wireless USB, wired LAN, etc.)....[T]he inventive camera system automatically connects to the internet preferably via WIFI, although cellular network, etc. connection is also contemplated, when it has a predetermined number of pictures and can so connect, and will send the pictures to virtually any internet destination without user intervention. For example, the inventive camera system can be instructed to automatically send the pictures to an email account, internet picture hosting site, web-based photo printing site, the user's internet-connected home computer (when he is on vacation, for instance), etc. In this way, valuable pictures are immediately backed-up and the need for reliance on expensive camera storage media like flash cards, SD, etc. is greatly reduced."</i> <i>See also, e.g., 6:37-41: "This aspect of the present invention allows the user to interact with menus, features and functions displayed on the LCD display directly rather than through ancillary buttons or cursor control."</i>
(2) a user-selectable menu option to enable a controller to automatically connect to the remote	<i>See, e.g., 12:6-38: "[T]he inventive camera system is operable for being instructed to automatically initiate a connection to the internet, LAN, printer, etc. whenever the predetermined conditions are met and it is in range of the network connection, (e.g., WIFI, Blue-</i>

<p>picture hosting service and upload designated pictures stored in the non-volatile memory via at least one of the network interfaces;</p>	<p>tooth, wireless USB, wired LAN, etc). ...[T]he inventive camera system automatically connects to the internet preferably via WIFI, although cellular network, etc. connection is also contemplated, when it has a predetermined number of pictures and can so connect, and will send the pictures to virtually any internet destination without user intervention. For example, the inventive camera system <b><i>can be instructed to automatically</i></b> send the pictures to an email account, <b><i>internet picture hosting site, web-based photo printing site</i></b>, the user's internet-connected home computer (when he is on vacation, for instance), etc. In this way, valuable pictures are immediately backed-up and the need for reliance on expensive camera storage media like flash cards, SD, etc. is greatly reduced."</p> <p><i>See also, e.g., 6:37-41: "This aspect of the present invention allows the user to interact with menus, features and functions displayed on the LCD display directly rather than through ancillary buttons or cursor control."</i></p>
<p>(3) a user-selectable menu option to enable the controller to automatically connect to a home computer and upload designated pictures stored in the non-volatile memory via the WIFI interface; and</p>	<p><i>See, e.g., 12:6-38: "[T]he inventive camera system is operable for being instructed to automatically initiate a connection to the internet, LAN, printer, etc. whenever the predetermined conditions are met and it is in range of the network connection, (e.g., WIFI, Bluetooth, wireless USB, wired LAN, etc). ...[T]he inventive camera system automatically connects to the internet preferably via WIFI, although cellular network, etc. connection is also contemplated, when it has a predetermined number of pictures and can so connect, and will send the pictures to virtually any internet destination without user intervention. For example, the inventive camera system <b><i>can be instructed to automatically</i></b> send the pictures to an email account, internet picture hosting site, web-based photo printing site, <b><i>the user's internet-connected home computer</i></b> (when he is on vacation, for instance), etc. In this way, valuable pictures are immediately backed-up and the need for reliance on expensive camera storage media like flash cards, SD, etc. is greatly reduced."</i></p> <p><i>See also, e.g., 6:37-41: "This aspect of the present invention allows the user to interact with menus, features and functions displayed on the LCD display directly rather than through ancillary buttons or cursor control."</i></p>
<p>(f) the controller configured to (1) automatically connect to the remote picture hosting service and cause an upload of one or more pictures stored in the non-volatile memory to the remote picture hosting service via at least one of</p>	<p><i>See, e.g., 12:6-38: "[T]he inventive camera system is operable for being instructed to automatically initiate a connection to the internet, LAN, printer, etc. whenever the predetermined conditions are met and it is in range of the network connection, (e.g., WIFI, Bluetooth, wireless USB, wired LAN, etc). ...[T]he inventive camera system automatically connects to the internet preferably via WIFI, although cellular network, etc. connection is also contemplated, when it has a predetermined number of pictures and can so connect, and will send the pictures to virtually any internet destination without user intervention. For example, the inventive camera system can be instruct-</i></p>

<p>the network interfaces, after predetermined conditions are met, the predetermined conditions including at least receiving:</p> <p>(i) an indication that the menu options of elements (e)(1) and (e)(2) have been enabled;</p> <p>(ii) an indication that the system is connected to the internet via either of the network interfaces to the remote picture hosting service;</p>	<p>ed <i>to automatically</i> send the pictures to an email account, <i>internet picture hosting site</i>, <i>web-based photo printing site</i>, the user's internet-connected home computer (when he is on vacation, for instance), etc. In this way, valuable pictures are immediately backed-up and the need for reliance on expensive camera storage media like flash cards, SD, etc. is greatly reduced."</p> <p><i>See also, e.g., 11:38-64: "[T]he inventive camera system is equipped with software and hardware coupled to the camera controller allowing independent communication with a computer network for the primary purpose of communicating its pictures over the internet. Currently preferred is WIFI which is typically connected by LAN, routers, etc. to the internet and which usually allows WIFI-equipped devices to independently connect to the internet. Alternatively, the invention contemplates the use of wired LAN, cellular data networks, etc. as the interconnection technology used by the inventive camera system.....So equipped, the inventive camera system can now independently upload its pictures to any of the internet-based photo printing services, such as those provided by Walmart.com, Walgreens.com, Kodak.com, etc., without the need for first storing the photos to a computer system and then connecting the computer system to the internet to upload the pictures."</i></p>
<p>(2) automatically connect to the home computer and cause an upload of one or more pictures stored in the non-volatile memory to the home computer via the WIFI interface, after predetermined conditions are met, the predetermined conditions including at least receiving:</p> <p>(i) an indication that the menu options of elements (e)(1) and (e)(3) have been enabled;</p> <p>(ii) an indication that the system is connected to the home computer via the WIFI interface.</p>	<p><i>See, e.g., 12:6-38: "[T]he inventive camera system is operable for being instructed to automatically initiate a connection to the internet, LAN, printer, etc. whenever the predetermined conditions are met and it is in range of the network connection, (e.g., WIFI, Bluetooth, wireless USB, wired LAN, etc.)....[T]he inventive camera system automatically connects to the internet preferably via WIFI, although cellular network, etc. connection is also contemplated, when it has a predetermined number of pictures and can so connect, and will send the pictures to virtually any internet destination without user intervention. For example, the inventive camera system can be instructed to automatically send the pictures to an email account, internet picture hosting site, web-based photo printing site, the user's internet-connected home computer (when he is on vacation, for instance), etc. In this way, valuable pictures are immediately backed-up and the need for reliance on expensive camera storage media like flash cards, SD, etc. is greatly reduced."</i></p>
<p>39. The camera system of claim 38 further comprising:</p> <p>(g) a voice recognizer (1) coupled to and configured</p>	<p><i>See, e.g., Abstract: "The voice recognition unit is operable for, among other things, receiving multiple different voice commands, recognizing the vocal commands, associating the different voice commands to one camera command and controlling at least some aspect of the digital camera operation in response to these voice com-</i></p>

to receive and process sounds transduced by at least one microphone, and (2) configured to recognize one or more words associated with an operation for the camera; (h) the controller further configured to cause the camera to perform the operation associated with the one or more words recognized by the voice recognizer.	mands.” <i>See also, e.g., 12:57-66:</i> “The figure shows one embodiment of the system and the relationship between the camera controller 40, camera CCD 54, AF motor (also referred to as auto focus 60 system) 48, zoom motor (also referred to as zoom) 46, storage media 44, remote light sensor 66, buttons 64, touch pad device 62, lcd display 14, view finder 16, view finder sensors 68, gaze tracker 57, view finder use detector 58, wink detector 60, <b>microphone 10d</b> , <b>microphone 10e</b> , <b>microphone 10f</b> , selection circuitry 59, <b>voice recognition unit 56</b> , and other camera control 50.”
40. The camera system of claim 38 further comprising a camera body and a stylus housed within the camera body.	<i>See, e.g., 6:41-43:</i> “For those embodiments of touch technology requiring use of a stylus, it is further contemplated that the camera body house the stylus for easy access by the user.”

Remarks dated November 24, 2015.

48. The examiner rejected the claims in an office action dated June 20, 2017 on 112, double patenting, as anticipated by Rothschild (U.S. 2006/0114338) and as obvious over Rothschild (U.S. 2006/0114338) in view of Imamura (U.S. 2005/0168579). *See* Non-Final Rejection dated June 20, 2017.



## DETAILED ACTION

### *Notice of Pre-AIA or AIA Status*

1. The present application is being examined under the pre-AIA first to invent provisions.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the first paragraph of 35 U.S.C. 112(a):

(a) IN GENERAL.—The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor or joint inventor of carrying out the invention.

The following is a quotation of the first paragraph of pre-AIA 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 21-28 rejected under 35 U.S.C. 112(a) or 35 U.S.C. 112 (pre-AIA), first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor or a joint inventor, or for applications subject to pre-AIA 35 U.S.C. 112, the inventor(s), at the time the application was filed, had possession of the claimed invention.

- a. Claim 21 states "(i) receive, via the touch sensitive display, a user selection of an upload option that instructs the camera system to confine automatic picture upload to periods without potentially increased cellular network access fees" and Claim 25 states "(i) display on the touch sensitive display a

user-selectable input that instructs the camera system to confine automatic upload periods without potentially increased cellular network access fees". The specification sets forth multiple inventions and teaches a "touch sensitive display" in paragraph 22. The claims correspond to an invention that is set forth in paragraphs 36 – 38. Paragraph 38 states: "Additionally, the inventive camera system is preferably operable so that the automatic connection is made only at certain times of the day or weekends, etc., so as to confine picture transmission to periods of low network usage or periods of cheaper network access, etc.". There is no disclosure of the touch sensitive display used to select an upload option or a user-selectable input related to upload periods.

b. Claim 21 states "automatically connect to the picture hosting service"... when "all three of the following conditions are met: (1)"... "within one of the periods without potentially increased cellular network access fees..." , (2)..."connected to internet via the cellular interface..." , "and (3) at least one"... "picture"... "has been designated through the touch sensitive display"... "to be uploaded...". Claim 25 states "automatically connect to a picture hosting service..."during any period"... "in which all the following conditions are met: (1) the controller has received from a display a selection"... "to confine"... "uploads to periods without potentially increased cellular network fees; (2) controller has confirmed"... "system is within a period".. "as determined using data from the cellular interface; (3) they system has connection to the internet..." ; and (4) at least one image"... "has been designated through the touch sensitive display" ...

to be uploaded...". Paragraph 38 states: "In the second embodiment, the inventive camera system automatically connects to the internet preferably via WIFI, although cellular network, etc. connection is also contemplated, when it has a predetermined number of pictures and can so connect...". Thus, the description only supports the automatic connection upload when two conditions are met (1) "it has a predetermined number of pictures" and (2) "can so connect". Thus, the disclosure does not support the conditions of automatic upload set forth in claims 21 and 25.

c. Claim 21 sets forth the limitation "within one of the periods without potentially increased cellular network access fees, as determined using data from the cellular interface". Claim 25 sets forth the limitation "within a period without potentially increased cellular network access fees, as determined using data from the cellular interface". Paragraph 38 states: "Additionally, the inventive camera system is preferably operable so that the automatic connection is made only at certain times of the day or weekends, etc., so as to confine picture transmission to periods of low network usage or periods of cheaper network access, etc.". There is no disclosure of determining a period based on data from the cellular interface.

d. Claim 21 sets forth the limitation "at least one" ... "picture" ... "has been designated through the touch sensitive display as part of the group of pictures to be uploaded...". Claim 25 sets forth the limitation "at least one" .. "picture" ... "has

been designated through the touch sensitive display as part of the group of"...."pictures to be uploaded". The specification sets forth multiple inventions and teaches a "touch sensitive display" in paragraph 22. Paragraph 36 states "The camera system preferably includes the ability for the user to indicate to the camera which pictures to upload so that the camera offloads only those pictures that are so indicated by the user." There is no disclosure that the touch sensitive display is used to select photos to be uploaded.

e. Claims 22-24 depend from claim 21 and therefore include the deficiencies of claim 21.

f. Claims 26-28 depend from claim 25 and therefore include the deficiencies of claim 25.

#### ***Double Patenting***

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*,



686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on nonstatutory double patenting provided the reference application or patent either is shown to be commonly owned with the examined application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement. See MPEP § 717.02 for applications subject to examination under the first inventor to file provisions of the AIA as explained in MPEP § 2159. See MPEP § 2146 *et seq.* for applications not subject to examination under the first inventor to file provisions of the AIA. A terminal disclaimer must be signed in compliance with 37 CFR 1.321(b).

The USPTO Internet website contains terminal disclaimer forms which may be used. Please visit [www.uspto.gov/patent/patents-forms](http://www.uspto.gov/patent/patents-forms). The filing date of the application in which the form is filed determines what form (e.g., PTO/SB/25, PTO/SB/26, PTO/AIA/25, or PTO/AIA/26) should be used. A web-based eTerminal Disclaimer may be filled out completely online using web-screens. An eTerminal Disclaimer that meets all requirements is auto-processed and approved immediately upon submission. For more information about eTerminal Disclaimers, refer to [www.uspto.gov/patents/process/file/efs/guidance/eTD-info-I.jsp](http://www.uspto.gov/patents/process/file/efs/guidance/eTD-info-I.jsp).

5. Claims 21 and 25 are rejected on the ground of nonstatutory double patenting as being unpatentable over claim 1 of U.S. Patent No. 9,936,116. Although the claims at issue are not identical, they are not patentably distinct from each other because the current claims are broader and thus fully met by claim 1 of U.S. Patent No 9,936,116.

6. Claims 21 and 25 are rejected on the ground of nonstatutory double patenting as being unpatentable over claims 1 and 17 respectively of U.S. Patent No. 10,063,761. Although the claims at issue are not identical, they are not patentably distinct from each other because the current claims are broader and thus fully met by claims 1 and 17 of U.S. Patent No. 10,063,761.

### ***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- i. Kusaka, Yosuke et al. US 20050001024 A1 discloses automatically uploading images from a cellphone (See paragraph 0477)
- ii. Ma; David Yin-Shur et al. US 20060031126 A1 discloses a mobile phone that can automatically upload photo data (see paragraph 0049) and described the cost of cellular networks in uploading photos (see paragraph 0009).
- iii. Anderson; Eric C. US 20060013197 A1 discloses automatically uploaded images (see abstract)
- iv. Slater, Michael et al. US 20020087546 A1 discloses a digital photo management system that automatically uploads photos (See paragraph 0013)
- v. Montulli, et al. US 2006/0189349 discloses a system for automatic uploading of cell phone images (See abstract)

- vi. Paul, et al. US 2005/0266839 discloses automatically sending images at a predetermined time (See claim 6)
- vii. Kahn, et al. US2004/0004737 discloses automatically sending photos to a printing service (See abstract)
- viii. Bateman, et al. (US 2002/0194414) discloses transferring data such as images over a cellular network (See paragraphs 0020, 0040)

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to RODNEY FULLER whose telephone number is (571)272-2118. The examiner can normally be reached on 8:00 am - 4:30 pm, Monday - Friday.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Clayton Laballe can be reached on 571-272-1594. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <https://ppair->

[my.uspto.gov/pair/PrivatePair](https://ppair-my.uspto.gov/pair/PrivatePair). Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Non-Final Rejection dated June 20, 2017.

49. On December 20, 2017, the applicant responded and amended the claims as follows:

**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application.

1 – 20. (Canceled)

21. (Currently Amended) A camera system comprising:

- (a) a lens;
- (b) a WIFI interface;
- (c) an image sensor configured to take pictures;
- (d) a non-volatile memory configured to store one or more pictures;
- (e) a touch sensitive display configured to display:
  - (1) a user-selectable menu option to designate one or more pictures stored in the non-volatile memory to be uploaded to a remote picture hosting service; and
  - (2) a user-selectable menu option to enable a controller to automatically connect to the remote picture hosting service and upload designated pictures stored in the non-volatile memory via the WIFI interface;
- (f) the controller configured to automatically connect to the remote picture hosting service and cause an upload of one or more pictures stored in the non-volatile memory to the remote picture hosting service via the WIFI interface, after predetermined conditions are met, the predetermined conditions including receiving:
  - (1) an indication that the menu options of elements (e)(1) and (e)(2) have been enabled; and

- (2) an indication that the system is connected to the internet via the WIFI interface;

~~(g) a wireless cellular interface;~~

~~(h) the touch sensitive display further configured to display a user-selectable menu option to enable the controller to automatically connect to the remote picture hosting service and upload designated pictures stored in the non-volatile memory via the wireless cellular interface;~~

~~(i) the controller further configured to automatically connect to the remote picture hosting service and cause an upload of one or more pictures stored in the non-volatile memory to the remote picture hosting service via the wireless cellular interface, after predetermined conditions are met, the predetermined conditions including receiving:~~

~~(1) an indication that the menu options of elements (c)(1) and (h) have been enabled;  
and  
(2) an indication that the system is connected to the internet via the wireless cellular interface.~~

22. (Canceled).

23. (Previously Presented) The camera system of claim 21 wherein the remote picture hosting service is associated with an email account.

24. (Previously Presented) The camera system of claim 21 further comprising:

(g) a voice recognizer (1) coupled to and configured to receive and process sounds transduced by at least one microphone, and (2) configured to recognize one or more words associated with an operation for the camera;

(h) the controller further configured to cause the camera to perform the operation associated with the one or more words recognized by the voice recognizer.

25. (Previously Presented) The camera system of claim 21, wherein the remote picture hosting service includes printing services.

26. (Previously Presented) The camera system of claim 21 further comprising a camera body and a stylus housed within the camera body.

27. (Previously Presented) The camera system of claim 21, wherein the controller is further configured with a picture editor for creating and storing a picture sequence file in the non-volatile memory, the picture sequence file comprising:

- (1) a first picture taken with the image sensor and stored in the non-volatile memory;
- (2) a second picture taken with the image sensor and stored in the non-volatile memory;
- (3) data from a sound file downloaded via the WIFI interface and stored in the non-volatile memory.

28. (Previously Presented) The camera system of claim 27, wherein the controller is further configured to upload the picture sequence file to the remote picture hosting service via the WIFI interface.

29. (Previously Presented) The camera system of claim 21 wherein the controller is configured to receive a selection of specific pictures stored in the non-volatile memory to be uploaded to the remote picture hosting service.

30. (Previously Presented) A camera system comprising:

(a) a lens;

(b) two or more network interfaces, including at least a WIFI interface and a wireless cellular interface;

(c) an image sensor configured to take pictures;

(d) a non-volatile memory configured to store one or more pictures;

(e) a touch sensitive display configured to display:

(1) a user-selectable menu option to designate one or more pictures stored in the non-volatile memory to be uploaded to a remote picture hosting service; and

(2) a user-selectable menu option to enable a controller to automatically connect to the remote picture hosting service and upload designated pictures stored in the non-volatile memory; and

(f) the controller configured to:

(1) automatically connect to the remote picture hosting service and cause an upload of one or more pictures stored in the non-volatile memory to the remote picture hosting service via one of the two or more network interfaces, after predetermined conditions are met, the predetermined conditions including receiving:

(i) an indication that the menu options of elements (e)(1) and (e)(2) have been enabled; and

(ii) an indication that the system is connected to the internet via at least one of the two or more network interfaces; and

(2) cause the upload to occur via the WIFI interface if the system is connected to the internet via both the WIFI interface and the wireless cellular interface.

31. (Previously Presented) The camera system of claim 30 wherein the remote picture hosting service is associated with an email account.

32. (Previously Presented) The camera system of claim 30 further comprising:

(g) a voice recognizer (1) coupled to and configured to receive and process sounds transduced by at least one microphone, and (2) configured to recognize one or more words associated with an operation for the camera;

(h) the controller further configured to cause the camera to perform the operation associated with the one or more words recognized by the voice recognizer.

33. (Previously Presented) The camera system of claim 30, wherein the remote picture hosting service includes printing services.

34. (Previously Presented) The camera system of claim 30 further comprising a camera body and a stylus housed within the camera body.

35. (Previously Presented) The camera system of claim 30, wherein the controller is further configured with a picture editor for creating and storing a picture sequence file in the non-volatile memory, the picture sequence file comprising:

(1) a first picture taken with the image sensor and stored in the non-volatile memory;

(2) a second picture taken with the image sensor and stored in the non-volatile memory;

(3) data from a sound file downloaded via one of the two or more interfaces and stored in the non-volatile memory.

36. (Previously Presented) The camera system of claim 35, wherein the controller is further configured to upload the picture sequence file to the remote picture hosting service via one of the two or more interfaces.



37. (Previously Presented) The camera system of claim 30 wherein the controller is configured to receive a selection of specific pictures stored in the non-volatile memory to be uploaded to the remote picture hosting service.

38. (Previously Presented) A camera system comprising:

- (a) a lens;
- (b) two or more network interfaces, including at least a WIFI interface and a wireless cellular interface;
- (c) an image sensor configured to take pictures;
- (d) a non-volatile memory configured to store one or more pictures;
- (e) a touch sensitive display configured to display:
  - (1) a user-selectable menu option to designate one or more pictures stored in the non-volatile memory to be uploaded to a remote picture hosting service;
  - (2) a user-selectable menu option to enable a controller to automatically connect to the remote picture hosting service and upload designated pictures stored in the non-volatile memory via at least one of the network interfaces;
  - (3) a user-selectable menu option to enable the controller to automatically connect to a home computer and upload designated pictures stored in the non-volatile memory via the WIFI interface; and
- (f) the controller configured to
  - (1) automatically connect to the remote picture hosting service and cause an upload of one or more pictures stored in the non-volatile memory to the remote picture hosting service via at least one of the network interfaces, after predetermined conditions are met, the predetermined conditions including at least receiving:
    - (i) an indication that the menu options of elements (e)(1) and (e)(2) have been enabled;
    - (ii) an indication that the system is connected to the internet via either of the network interfaces to the remote picture hosting service;
  - (2) automatically connect to the home computer and cause an upload of one or more pictures stored in the non-volatile memory to the home computer via the WIFI

interface, after predetermined conditions are met, the predetermined conditions including at least receiving:

- (i) an indication that the menu options of elements (e)(1) and (e)(3) have been enabled;
- (ii) an indication that the system is connected to the home computer via the WIFI interface.

39. (Previously Presented) The camera system of claim 38 further comprising:

(g) a voice recognizer (1) coupled to and configured to receive and process sounds transduced by at least one microphone, and (2) configured to recognize one or more words associated with an operation for the camera;

(h) the controller further configured to cause the camera to perform the operation associated with the one or more words recognized by the voice recognizer.

40. (Previously Presented) The camera system of claim 38 further comprising a camera body and a stylus housed within the camera body.

Amendments to the Claims dated December 20, 2017.

50. On January 30, 2018 the examiner and applicant held an interview in which applicant pointed out that the examiner issued a notice of allowance in related Application No. 15/188,736. *See* Interview Summary and Remarks dated February 8, 2018. Applicant proposed an amendment to the claims in the present case to include allowable subject matter from the '736 application.

**INTERVIEW SUMMARY AND REMARKS**

On January 30, 2018, Examiner Rodney Fuller and the undersigned counsel of record Justin Lesko conducted a brief interview. During the interview, Mr. Lesko pointed out that the Examiner issued a notice of allowance in related Application No. 15/188,736 (“the ‘736 Application”) on January 19, 2018. Although Applicant maintains that the claims filed with Applicant’s Response to NFOA dated December 20, 2017 are patentable, Mr. Lesko proposed that (in the interest of compact and efficient prosecution) an amendment to the claims should be filed in the present case to include the allowable subject matter from the ‘736 Application, which would result in prompt allowance. The Examiner agreed and instructed Applicant to file a supplemental amendment herein.

Accordingly, without prejudice or disclaimer of the previously claimed subject matter, which Applicant expressly reserves the right to pursue in one more continuation applications, Applicant has amended the claims as set forth herein to claim allowable subject matter from the ‘736 Application.

In view of the above, Applicant believes that claims 21 and 23-40 are in condition for allowance. If the Examiner has any questions or believes an interview would expedite prosecution of this case, please contact the undersigned.

Respectfully Submitted,

/Justin J. Lesko/

Justin J. Lesko  
Reg. No. 69,643

Dated: February 8, 2018

Law Offices of Steven G. Lisa, Ltd.  
55 East Monroe Street Suite 3800  
Chicago, IL 60603  
Telephone: (773) 484-3285  
*Attorney for Applicant*

Interview Summary and Remarks dated February 8, 2018.

51. On February 8, 2018, the applicant amended the claims as follows “to include the allowable subject matter from the ‘736 Application”:

**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application.

1 – 20. (Canceled)

21. (Currently Amended) A camera system comprising:

(a) a lens;

(b) a ~~WIFI-cellular~~ interface;

(c) an image sensor configured to take pictures;

(d) a non-volatile ~~local~~ memory configured to store one or more pictures;

(e) a touch sensitive display; ~~configured to display:~~

~~(1) a user-selectable menu option to designate one or more pictures stored in the non-volatile memory to be uploaded to a remote picture hosting service; and~~

~~(2) a user-selectable menu option to enable a controller to automatically connect to the remote picture hosting service and upload designated pictures stored in the non-volatile memory via the WIFI interface;~~

(f) ~~the a~~ controller configured to:

~~(i) receive, via the touch sensitive display, a user selection of an upload option that instructs the device to confine automatic picture upload to periods without potential cellular network access fees;~~

~~(ii) automatically connect to the a remote picture hosting service and cause an upload of one or more pictures stored in the non-volatile memory to the remote picture hosting service via the WIFI-cellular interface, after predetermined conditions are met, the predetermined conditions including receiving:~~

~~(1) data from the cellular interface used by the controller to determine that the upload is allowed based on the selected upload option, an indication that the menu options of elements (e)(1) and (e)(2) have been enabled; and~~

~~(2) an indication that the system is connected to the internet via the WIFI-cellular interface; and~~

(3) an indication from the local memory that a user has elected an option to designate at least one picture from the group of pictures stored in the local memory to be uploaded to the remote picture hosting service.

(g) a wireless cellular interface;

(h) the touch-sensitive display further configured to display a user-selectable menu option to enable the controller to automatically connect to the remote picture hosting service and upload designated pictures stored in the non-volatile memory via the wireless cellular interface;

(i) the controller further configured to automatically connect to the remote picture hosting service and cause an upload of one or more pictures stored in the non-volatile memory to the remote picture hosting service via the wireless cellular interface, after predetermined conditions are met, the predetermined conditions including receiving:

(1) an indication that the menu options of elements (e)(1) and (h) have been enabled;

and

(2) an indication that the system is connected to the internet via the wireless cellular interface.

22. (Canceled).

23. (Previously Presented) The camera system of claim 21 wherein the remote picture hosting service is associated with an email account.

24. (Previously Presented) The camera system of claim 21 further comprising:

(g) a voice recognizer (1) coupled to and configured to receive and process sounds transduced by at least one microphone, and (2) configured to recognize one or more words associated with an operation for the camera;

(h) the controller further configured to cause the camera to perform the operation associated with the one or more words recognized by the voice recognizer.

25. (Previously Presented) The camera system of claim 21, wherein the remote picture hosting service includes printing services.

26. (Previously Presented) The camera system of claim 21 further comprising a camera body and a stylus housed within the camera body.

27. (Currently Amended) The camera system of claim 21, wherein the controller is further configured ~~with a picture editor for so creating, create, and storing store~~ a picture sequence file in the non-volatile memory, the picture sequence file comprising:

- (1) a first picture taken with the image sensor and stored in the non-volatile memory;
- (2) a second picture taken with the image sensor and stored in the non-volatile memory;
- (3) data from a sound file downloaded via the WIFI interface and stored in the non-volatile memory.

28. (Previously Presented) The camera system of claim 27, wherein the controller is further configured to upload the picture sequence file to the remote picture hosting service via the WIFI interface.

29. (Previously Presented) The camera system of claim 21 wherein the controller is configured to receive a selection of specific pictures stored in the non-volatile memory to be uploaded to the remote picture hosting service.

30. (Currently Amended) ~~The camera system of claim 21 further comprising:~~

- ~~(g) first and second microphones facing different directions and configured to receive and detect sound signals; and~~
- ~~(h) a detector coupled to the microphones and configured to receive, process and combine sound signals detected at the microphones. A camera system comprising:~~
  - ~~(a) a lens;~~
  - ~~(b) two or more network interfaces, including at least a WIFI interface and a wireless cellular interface;~~
  - ~~(c) an image sensor configured to take pictures;~~
  - ~~(d) a non-volatile memory configured to store one or more pictures;~~
  - ~~(e) a touch sensitive display configured to display;~~

(1) a user-selectable menu option to designate one or more pictures stored in the non-volatile memory to be uploaded to a remote picture hosting service; and

(2) a user-selectable menu option to enable a controller to automatically connect to the remote picture hosting service and upload designated pictures stored in the non-volatile memory; and

(f) the controller configured to:

(1) automatically connect to the remote picture hosting service and cause an upload of one or more pictures stored in the non-volatile memory to the remote picture hosting service via one of the two or more network interfaces; after predetermined conditions are met, the predetermined conditions including receiving:

(i) an indication that the menu options of elements (e)(1) and (e)(2) have been enabled; and

(ii) an indication that the system is connected to the internet via at least one of the two or more network interfaces; and

(2) cause the upload to occur via the WIFI interface if the system is connected to the internet via both the WIFI interface and the wireless cellular interface.

31. (Currently Amended ) The camera system of claim 30 wherein the remote picture hosting service is associated with an email account; detector is coupled to a voice recognizer.

32. (Currently Amended) The camera system of claim ~~30~~21 further comprising:

(g) the non-volatile local memory configured to maintain and store a plurality of recognizable words having different plain meanings and commonly associated with taking a picture, the recognition of any of which will cause the camera to take a picture;

(h) the controller including a control program having instructions to control and respond to a voice recognizer;

(i) the voice recognizer (1) coupled to and configured to receive and process sounds transduced by at least one microphone, and (2) configured to receive a first and a second human sound spoken by the same person, wherein the voice recognizer is operable to recognize using speaker-independent voice-recognition;



(i) the first human sound as a first human spoken word from among the plurality, the recognized first human spoken word being assigned by the control program to be a command for the camera to take a picture, and

(ii) the second human sound as a second human spoken word from among the plurality, the recognized second human spoken word being different from the first human spoken word and also simultaneously assigned by the control program to be the same camera command to take a picture;~~recognize one or more words associated with an operation for the camera;~~

~~(h) the controller further configured to cause the camera to perform the operation associated with the one or more words recognized by the voice recognizer.~~

33. (Currently Amended) The camera system of claim ~~30~~32, wherein the voice recognizer is configured to receive and process a third human sound to be recognized as a third word that is different from the first and second words and is used by the control program to perform a second camera command;~~remote picture hosting service includes printing services.~~

34. (Currently Amended) The camera system of claim ~~30~~33, wherein the controller is configured to delay the second camera command for an intentional period of time after the voice recognizer recognizes the third word;~~further comprising a camera body and a stylus housed within the camera body.~~

35. (Currently Amended) The camera system of claim ~~30~~32, wherein one of the words is "snap";~~the controller is further configured with a picture editor for creating and storing a picture sequence file in the non-volatile memory, the picture sequence file comprising:~~  
~~(1) a first picture taken with the image sensor and stored in the non-volatile memory;~~  
~~(2) a second picture taken with the image sensor and stored in the non-volatile memory;~~  
~~(3) data from a sound file downloaded via one of the two or more interfaces and stored in the non-volatile memory.~~

36. (Currently Amended) The camera system of claim ~~35~~32, wherein one of the words is "cheese," the controller is further configured to upload the picture sequence file to the remote picture hosting service via one of the two or more interfaces.

37. (Currently Amended) The camera system of claim ~~36~~21 wherein the controller is configured to cause uploaded pictures to thereafter be transmitted to another party, ~~receive a selection of specific pictures stored in the non-volatile memory to be uploaded to the remote picture hosting service,~~

38. (Currently Amended) A camera system comprising:

- (a) a lens;
- (b) ~~two or more network interfaces, including at least a WiFi interface and a wireless cellular interface;~~
- (c) an image sensor configured to take pictures;
- (d) a non-volatile memory configured to store one or more pictures;
- (e) ~~a touch sensitive display configured to display:~~
  - ~~(1) a user-selectable menu option to designate one or more pictures stored in the non-volatile memory to be uploaded to a remote picture hosting service;~~
  - ~~(2) a user-selectable menu option to enable a controller to automatically connect to the remote picture hosting service and upload designated pictures stored in the non-volatile memory via at least one of the network interfaces;~~
  - ~~(3) a user-selectable menu option to enable the controller to automatically connect to a home computer and upload designated pictures stored in the non-volatile memory via the WiFi interface; and~~
- (f) ~~the a~~ controller configured to
  - (1) receive, via the touch sensitive display, a user selection of an upload option that instructs the device to confine automatic picture upload to periods without potential cellular network access fees;
  - (2) automatically connect to the a remote picture hosting service and cause an upload of one or more pictures stored in the non-volatile memory to the remote picture hosting service via at least one of the network~~the cellular~~ interfaces, after

~~predetermined conditions are met, the predetermined conditions including at least receiving:~~

- ~~(i) data from the cellular interface used by the controller to determine that the upload is allowed based on the selected upload option; an indication that the menu options of elements (e)(1) and (e)(2) have been enabled;~~
  - ~~(ii) an indication that the system is connected to the internet via either of the network-cellular interfaces to the remote picture hosting service; and~~
  - ~~(iii) an indication from the local memory that a user has elected an option to designate at least one picture from the group of pictures stored in the local memory to be uploaded to the remote picture hosting service;~~
- (23) ~~automatically connect to the home computer and cause an upload of one or more pictures stored in the non-volatile memory to the a home computer via the WiFi-cellular interface, after predetermined conditions are met, the predetermined conditions including at least receiving:~~
- ~~(i) data from the cellular interface used by the controller to determine that the upload is allowed based on the selected upload option; an indication that the menu options of elements (e)(1) and (e)(3) have been enabled; and~~
  - ~~(ii) an indication from the local memory that a user has elected an option to designate at least one picture from the group of pictures stored in the local memory to be uploaded to the home computer; that the system is connected to the home computer via the WiFi interface.~~

39. (Previously Presented) The camera system of claim 38 further comprising:

(g) a voice recognizer (1) coupled to and configured to receive and process sounds transduced by at least one microphone, and (2) configured to recognize one or more words associated with an operation for the camera;

(h) the controller further configured to cause the camera to perform the operation associated with the one or more words recognized by the voice recognizer.

40. (Previously Presented) The camera system of claim 38 further comprising a camera body and a stylus housed within the camera body.

Amendments to the Claims dated Feb. 8, 2018.

52. On May 29, 2018, the examiner allowed the claims. *See* Notice of Allowance dated May 29, 2018.

## ii. '472 Patent File History

53. Below is a summary based on my understanding of the file history of the '472 Patent (CEV-0003757–0017548).

54. The application leading to the '472 Patent was filed on October 25, 2019 and the claims were amended the same day to the following<sup>2</sup>:

**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application.

1 – 20. (Canceled).

21. (New) A camera system comprising:

- (a) a lens;
- (b) a cellular interface;
- (c) an image sensor that is coupled to the lens and operable to capture pictures;
- (d) a non-volatile local memory that is coupled to the image sensor and operable to store pictures captured by the image sensor;
- (e) a touch sensitive display;
- (f) a controller coupled to the cellular interface, the non-volatile local memory and the touch sensitive display, and configured to:

- (i) receive, via the touch sensitive display, a user selection of an upload option that instructs the camera system to confine automatic picture upload to periods without potentially increased cellular network access fees;

- (ii) automatically connect to a picture hosting service that is internet-based and enable an upload to the picture hosting service, over the internet and via the cellular interface, of a group of image sensor-captured pictures stored in the local memory, during any period detected by the controller in which all three of the following conditions are met:

- (1) the upload is allowed because the system is within one of the periods without potentially increased cellular network access fees, as determined using data from the cellular interface,
- (2) the system is connected to the internet via the cellular interface; and
- (3) at least one image sensor-captured picture stored in the local memory has been designated through the touch sensitive display as part of the group of pictures to be uploaded to the picture hosting service.

22. (New) The camera system of claim 21, wherein the picture hosting service includes printing services.

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<sup>2</sup> Original claims 21–22 issued as claims 1–2 of the '472 Patent, respectively. Original claims 25–26 issued as claims 5–6 of the '472 Patent. *See* Issue Classification dated July 20, 2021.

23. (New) The camera system of claim 21, wherein the controller is configured to automatically connect to the picture hosting service and enable the upload immediately at any time the three conditions are met.

24. (New) The camera system of claim 21, wherein the controller is configured to automatically independently connect to the picture hosting service and enable the upload.

25. (New) A camera system comprising:

- (a) a lens;
- (b) a cellular interface;
- (c) an image sensor that is coupled to the lens and operable to capture pictures;
- (d) a non-volatile local memory that is coupled to the image sensor and operable to store pictures captured by the image sensor;
- (e) a touch sensitive display;
- (f) a controller coupled to the cellular interface, the non-volatile local memory and the touch sensitive display, and configured to:

- (i) display on the touch sensitive display a user-selectable input that instructs the camera system to confine automatic picture upload to periods without potentially increased cellular network access fees;

- (ii) automatically connect to a picture hosting service that is internet-based and enable an upload to the picture hosting service, over the internet and via the cellular interface, of a group of image sensor-captured pictures stored in the local memory, during any period detected by the controller in which all the following conditions are met:

- (1) the controller has received from the display a selection of the user-selectable input that instructs the camera system to confine automatic picture uploads to periods without potentially increased cellular network access fees;
- (2) the controller has confirmed that the camera system is within a period without potentially increased cellular network access fees, as determined using data from the cellular interface;
- (3) the system has a connection to the internet via the cellular interface; and

(4) at least one image sensor-captured picture stored in the local memory has been designated through the touch sensitive display as part of the group of image sensor-captured pictures to be uploaded to the picture hosting service.

26. (New) The camera system of claim 25, wherein the picture hosting service includes printing services.

27. (New) The camera system of claim 25, wherein the controller is configured to automatically connect to the picture hosting service and enable the upload at any time the conditions are met.

28. (New) The camera system of claim 25, wherein the controller is configured to automatically independently connect to the picture hosting service and enable the upload.

Amendment to the Claims dated Oct. 25, 2019.

55. Applicant argued that the amended claims are in a condition for allowance for at least the same reasons the examiner recently had allowed claims of related U.S. Patent Nos. 9,936,116 and 10,063,761 to issue. For example, the applicant argued the following:

### REMARKS

In this preliminary amendment, Applicant has amended the title of the invention and the specification to cross-reference related applications. Applicant has also amended the drawings to show the features of the invention specified in the claims. In the claims, Applicant cancels claims 1 – 20 and adds new claims 21 – 28 (2 independent claims and 6 dependent claims).

Independent claims 21 and 25 are in condition for allowance for at least the same reasons that the Examiner recently issued the claims of related U.S. Patent Nos. 9,936,116 and 10,063,761 in this family. For example, claim 21 element (f)(i) recites:

“a controller... configured to... receive, via the touch sensitive display, a user selection of *an upload option that instructs the camera system to confine automatic picture upload to periods without potentially increased cellular network access fees.*”

(emphasis added). And claim 21 (f)(ii) recites:

“a controller... configured to... *automatically connect to a picture hosting service that is internet-based and enable an upload to the picture hosting service,* over the internet and via the cellular interface, of a group of image sensor-captured pictures stored in the local memory, during *any period detected by the controller in which all three of the following conditions are met:*

(1) the upload is allowed because the system is within one of the periods without potentially increased cellular network access fees, as determined using data from the cellular interface,

(2) the system is connected to the internet via the cellular interface; and

(3) at least one image sensor-captured picture stored in the local memory has been designated through the touch sensitive display as part of the group of pictures to be uploaded to the picture hosting service.”

(emphasis added). Elements (f)(i) and (f)(ii) of independent claim 25 include similar limitations.

The claimed invention allows uploads to be turned off during periods with potentially increased cellular network access fees, yet the camera will *automatically* (1) connect and (2) enable upload to the picture hosting service of the group of pictures designated for upload in any period (*i.e.*, without regard to a specified time) *without* such fees. The system avoids potentially increased cellular network access fees, such as fees associated with data roaming, but without the need for the user to set a timer or decide in advance a specific time for upload. When the conditions are met, the camera takes advantage of the opportunity to upload to the picture hosting service on the internet by immediately backing up valuable pictures. Applicant’s disclosure at Paragraph 38 describes advantages of such a system while traveling:



In an enhancement to the above-disclosed embodiments of this aspect of the invention, the inventive camera system is operable for being instructed *to automatically initiate a connection to the internet*, LAN, printer, etc. whenever the predetermined conditions are met and it is in range of the network connection, (e.g., WIFI, Bluetooth, wireless USB, wired LAN, etc). Once the transmittal of the pictures is complete, the inventive camera system preferably terminates the connection. Additionally, the inventive camera system is preferably operable so that the automatic connection is made only at certain times of the day or weekends, etc., *so as to confine picture transmission to periods of low network usage or periods of cheaper network access, etc.*....In the second embodiment above, the inventive camera system automatically connects to the internet preferably via WIFI, although cellular network, etc. connection is also contemplated, when it has a predetermined number of pictures and can so connect, and will send the pictures to virtually any internet destination without user intervention. For example, the inventive camera system can be instructed to automatically send the pictures to an email account, internet picture hosting site, web-based photo printing site, the user's internet-connected home computer (*when he is on vacation*, for instance), etc. *In this way, valuable pictures are immediately backed-up* and the need for reliance on expensive camera storage media like flash cards, SD, etc. is greatly reduced.

As explained in the information disclosure statement provided herewith, none of the references of record discloses or suggests "an upload option that instructs the camera system to confine automatic picture upload to periods without potentially increased cellular network access fees." Furthermore, none of the references describes, as a condition for upload, that the controller determines "the upload is allowed because the system is within one of the periods without potentially increased cellular network access fees, as determined using data from the cellular interface" and that the controller automatically enables upload of designated photos to the picture hosting service when this condition and the other conditions are met. Thus, all of the pending claims are in condition for allowance for at least the same reasons that the Examiner recently issued the claims of the '116 and '761 patents in this family.

The remaining dependent claims are allowable as depending from the allowable independent claim and for their own additional limitations.

Applicant believes that no new matter has been added. In addition, Applicant has taken care to prepare the claims in a manner that does not fall within 35 U.S.C. Section 112, Para. 6. Specifically, Applicant has undertaken to draft the claims in a manner that recites structure, material, or acts in support of the various operations. Applicant requests that the Examiner inform Applicant if he believes that any claim falls within 35 U.S.C. Section 112, Para. 6, so that appropriate amendments can be made.

Applicant has also taken care to prepare the claims in compliance with 35 U.S.C. § 101 requiring claims to be directed to specific patentable subject matter. Applicant requests that the Examiner inform Applicant if he believes any claim is directed to any unpatentable subject matter so that appropriate amendments can be made.

Applicant also expressly reserves the right to swear behind and antedate art references (including those references identified in the various Information Disclosure Statements filed herein) pursuant to 37 C.F.R. § 1.131.

In view of the above, Applicant believes that claims 21-28 are in condition for allowance. If the Examiner has any questions or believes an interview would expedite prosecution of this case, please contact the undersigned.

Preliminary Amendment dated Oct. 25, 2019 at 7–9.

56. On October 25, 2019, applicant submitted an IDS and numerous comments attempting to distinguish various prior art references. Applicant argued the following, emphasizing the functions of the “controller . . . configured to”:

Independent claims 21 and 25 (and their dependencies) are in condition for allowance for at least the same reasons that the Examiner recently issued the claims of the '116 and '761 patents in this family. For example, claim 21 element (f)(i) recites:

“a controller... configured to... receive, via the touch sensitive display, a user selection of *an upload option that instructs the camera system to confine automatic picture upload to periods without potentially increased cellular network access fees.*”

(emphasis added). And claim 21 (f)(ii) recites:

“a controller... configured to... *automatically connect to a picture hosting service that is internet-based and enable an upload to the picture hosting service,* over the internet and via the cellular interface, of a group of image sensor-captured pictures stored in the local memory, during *any period detected by the controller in which all three of the following conditions are met:*

(1) the upload is allowed because the system is within one of the periods without potentially increased cellular network access fees, as determined using data from the cellular interface,

(2) the system is connected to the internet via the cellular interface; and

(3) at least one image sensor-captured picture stored in the local memory has been designated through the touch sensitive display as part of the group of pictures to be uploaded to the picture hosting service.”

(emphasis added). Elements (f)(i) and (f)(ii) of independent claim 25 include similar limitations.

The claimed invention allows uploads to be turned off during periods with potentially increased cellular network access fees, yet the camera will *automatically* (1) connect and (2) enable upload to the picture hosting service of the group of pictures designated for upload in any period (*i.e.*, without regard to a specified time) *without* such fees. The system avoids potentially increased cellular network access fees, such as fees associated with data roaming, but without the need for the user to set a timer or decide in advance a specific time for upload. When the

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<sup>9</sup> Alleged to disclose elements of related Patent: 10,063,761.

<sup>10</sup> Alleged to disclose elements of related Patent: 9,936,116.

conditions are met, the camera takes advantage of the opportunity to upload to the picture hosting service on the internet by immediately backing up valuable pictures. Applicant's disclosure at Paragraph 38 describes advantages of such a system while traveling:

In an enhancement to the above-disclosed embodiments of this aspect of the invention, the inventive camera system is operable for being instructed ***to automatically initiate a connection to the internet***, LAN, printer, etc. whenever the predetermined conditions are met and it is in range of the network connection, (e.g., WIFI, Bluetooth, wireless USB, wired LAN, etc). Once the transmittal of the pictures is complete, the inventive camera system preferably terminates the connection. Additionally, the inventive camera system is preferably operable so that the automatic connection is made only at certain times of the day or weekends, etc., ***so as to confine picture transmission to periods of low network usage or periods of cheaper network access, etc.***....In the second embodiment above, the inventive camera system automatically connects to the internet preferably via WIFI, although cellular network, etc. connection is also contemplated, when it has a predetermined number of pictures and can so connect, and will send the pictures to virtually any internet destination without user intervention. For example, the inventive camera system can be instructed to automatically send the pictures to an email account, internet picture hosting site, web-based photo printing site, the user's internet-connected home computer (***when he is on vacation***, for instance), etc. ***In this way, valuable pictures are immediately backed-up*** and the need for reliance on expensive camera storage media like flash cards, SD, etc. is greatly reduced.

None of the references of record discloses or suggests "an upload option that instructs the camera system to confine automatic picture upload to periods without potentially increased cellular network access fees." Furthermore, none of the references describes, as a condition for upload, that the controller determines "the upload is allowed because the system is within one of the periods without potentially increased cellular network access fees, as determined using data from the cellular interface" and that the controller automatically enables upload of designated photos to the picture hosting service when this condition and the other conditions are met. Thus, all of the pending claims are in condition for allowance for at least the same reasons that the Examiner recently issued the claims of the '116 and '761 patents in this family.

The automatic upload recited in each of the independent claims is also conditioned upon pictures being designated – the controller is configured to enable upload of the designated group of pictures if pictures are designated and the other conditions are met. This feature of the claims further distinguishes systems that only provide for uploading all stored pictures, as well as systems that upload each and every picture immediately in response to the picture being taken.

Applicant further discusses below the deficiencies of the references of record that

describe picture uploading.

### 1. Applicant's claims distinguish uploads that take place at a set time

Colby, Kusaka 1, and Kawaoka each purportedly attempt to address the costs associated with network access fees, but Applicant's claims provide significant advantages over the systems described in these references.

Applicant's claims clearly distinguish timer based uploads where the user picks a time for the system to upload pictures, and the system uploads pictures at that set, selected time, as purportedly described in Colby, Kusaka 1, and Kawaoka. *See, e.g.,* Colby at [0046] (stating "Other embodiments include modes wherein images are transmitted... **at a specific time of day**"); Kusaka 1 at [0432] and [0478] (describing that "[t]he CPU 50 stores in memory the selected time block, engages a means for time count such as the timer 74 to count the time and automatically executes the transmission of the specified image information to the outside by **detecting that the current time point has entered a selected time block**"); and Kawaoka at [0100] (stating "[t]he transmission allowance conditions-judging unit 170 **obtains time from the timer 86 through the time-obtaining section 160**. Then, the transmission allowance conditions-judging unit 170 judges whether or not to transmit images **based on the obtained time**.").

Applicant refers the Examiner to Applicant's December 11, 2017 interview summary in related Application No. 15/188,736 (now U.S. Patent No. 9,936,116). That summary explains the distinction over Colby, which also applies the Kusaka 1 and Kawaoka references (thus, Applicant believes these references are cumulative). Following the interview, the Examiner issued a notice of allowance. The summary reads in-part:

The Examiner asked whether the current claims are patentable over Colby (Pub. No. 2003/0030731), which purportedly allows a user to "designate a time of day" for picture uploads. Applicant distinguished the present claims from a "timer." Specifically, Applicant used the hypothetical example of an egg timer vs. a device that determines when an egg is actually finished. In a timer scenario, cook time is set – and the device will stop cooking the egg at a designated time, regardless of whether the egg is "done." *On the other hand, a device that actually determines whether an egg is "done" monitors the specific conditions of the egg and only stops cooking it when the conditions are right. Applicant's invention is comparable to the latter example and offers many explicit benefits over a simple timer. For example, a simple timer for picture upload (i.e., setting the upload for 8 PM) would still result in charges to a user's account if the user is "roaming" at the designated time that the upload begins. In short, a timer does not adequately prevent roaming or other network charges that can be*

*incurred during photo uploads...*

Indeed, there are numerous advantages to Applicant's claimed inventions compared to time-based uploads. With timer-based uploads, if there is no internet connection at the single defined time, upload will fail (current connection status is not even considered). The requirement to upload only at the single defined time, as opposed to uploading over the internet whenever an appropriate connection becomes available, prevents the opportunity to upload images during any intervening periods that arrive where internet is available and the camera contains a group of designated pictures. In contrast, with Applicant's claimed invention, during any of the (yet to be determined) multiple periods without potentially increased fees, the automatic upload of designated pictures will take place. The specific time of day for upload is not predefined. Thus, for example, a traveler that is roaming can continue over several days to take multiple pictures and designate them for upload, and whenever the camera detects that it is within one (or more) of the periods where there are not potentially increased cellular network access fees – regardless of time of day – the camera will automatically upload the pictures at that time.

As an alternative to the timer based uploads, Kawaoka also purportedly describes calculating the upload cost based on the file size or the amount of time the upload is expected to take and previously stored cost per minute estimates. The system determines whether to upload based on that internal calculation. Again, this more conventional method does not use current data from the cellular interface to determine whether or not the device is currently in a period of potentially increased cellular network access fees - the system has a stored cost parameter and makes basic calculations based on it. See, e.g., Kawaoka at [0013], and [0102] stating:

“[0102] ...The transmission allowance conditions-judging unit 170 ***calculates the cost for transmitting data based on the obtained data amount***.... If transmission cost is calculated based on communication time, the cost becomes equal to the communication cost per unit time times data amount divided by the data communication speed, ***using previously registered data communication speed and communication cost per unit time***. If the calculated transmission cost falls within a predetermined amount, the image transmission is allowed. However, if the data amount is above the predetermined amount, the data amount of images to be transmitted may be transmitted only after being compressed to a data amount that falls within the predetermined amount. Therefore, communication cost may be saved. Further, information relating to the communication cost maybe updated via the telephone communication line.”



As a further distinction, the uploads in Kawaoka are not to a picture hosting site on the internet and the uploads do not occur over the internet. Thus the camera of Kawaoka does not monitor internet connection status (it only monitors connection status over the phone communication line, generally, or connection status from the camera to an intermediary phone that acts as the uploader). *See e.g.*, [0107], discussing using phone numbers to complete uploads.

For at least the above reasons, Applicant's claims clearly distinguish Colby, Kusaka 1, and Kawaoka.

## 2. The remaining references do not address potentially increased cellular network access fees

Based on Applicant's review, it appears that the majority of the references say *absolutely nothing* about "network access fees" or "cellular network access fees," and therefore, these references certainly do not disclose or suggest Applicant's claimed system for confining uploads and automatically connecting and enabling upload during periods without potentially increased cellular network access fees. For at least this reason and others (with examples provided below), Applicant's claims are also allowable over the following references, whether considered individually or as a combination:

- **Rothschild** – Applicant and the Examiner addressed Rothschild on the record extensively during prosecution of Application Nos. 15/188,736 (now US Patent No. 9,936,116) and 14/950,370 (now US Patent No. 10,063,761). The Examiner initially relied upon Rothschild in rejections but later withdrew them. Applicant's current claims distinguish Rothschild for the same reasons as the claims of the '116 and '761 patents (because Rothschild fails to address potentially increased cellular network access fees), and more. For example, with respect to timing, Rothschild only automatically uploads "when" (e.g., *at the specific time*) the user *manually connects the camera to his intermediary local computer*, and it is Rothschild's *intermediary computer* (not the camera) that completes the upload. Rothschild at [0053] and [0056]. The upload to the internet in Rothschild is *not* by the camera at all, nor is it triggered automatically based on internet connection status of the camera.
- **Ward** – In addition to its failure to address network access fees, the Ward upload is *manually* initiated by a user pressing a "send" button. *See, e.g.*, Ward at [0016]-[0019].

Moreover, Ward says explicitly that *the user must “ensure[] that the camera is connected to the appropriate service”* (e.g., cellular phone service) prior to initiating upload. These operations are what Applicant’s claims distinguish and improve upon. In contrast to Ward, with Applicant’s claims, the controller automatically uploads designated pictures as claimed during detected periods without potentially increased cellular network access fees in which the connection is available.

- **Moore’s** – Moore’s fails to mention any cellular uploads (let alone access fees) because “802.11 protocol is used for all wireless communications.” Moore’s at [0034]. In addition, a picture or series of pictures is taken in response to an RFID tag being scanned or other user-triggered event, and the captured pictures are uploaded over a LAN to the server as they are taken (*not* based on upload conditions). *Id.* at [0028]-[0029].
- **Network Smart Capture** – In addition to failing to address cellular network access fees, the upload in “Network Smart Capture” is not automatic based on network conditions. Instead, “Fixed point observation mode” (p. 1) purports to take and upload photographs in response to the motion of a pet. It does not even address the same problems identified by Applicant, *because internet on the home network is assumed* at the time motion is sensed and all photos are uploaded during capturing.
- **Kusaka 2** –Applicant distinguished Kusaka 2 on the record during prosecution of Application Nos. 13/717,681 (now U.S. Patent No. 8,831,418) and 14/203,129 (now U.S. Patent No. 8,818,182). In each case, *the rejections in view of Kusaka 2 were overcome*, and the cases were allowed. In Kusaka 2, at the *time pictures are taken*, they are either stored on a memory card in “recording mode for memory cards” or on a server in “download recording mode.” *See, e.g.,* Kusaka 2 at [0470]. Thus, Kusaka fails to address network access fees, and also does not provide the user an option to designate captured photos for upload.
- **Feinberg** – Feinberg says nothing about access fees, and moreover, Feinberg describes uploading using an “Eye-Film” device that is *separate* from the camera and acts as an intermediary with a wireless interface for connecting to the internet. *See, e.g.,* Feinberg at [0027].
- **Anderson** – Anderson at 7:22-23 says that a photo sharing service can share revenue with a wireless service provider, but Anderson does not address periods of potentially

increased cellular network access fees or how uploads should be handled during such periods. Moreover, Anderson's uploads are all user-initiated, manual uploads.

- **Foster** – Foster says absolutely nothing about potentially increased network access fees or confining uploads to periods without potentially increased network access fees, because it uploads pictures to a wireless access point, not over a cellular network. Moreover, Foster uploads *all* images from the camera repository to the remote system – with its GUI, a user can see the images or select images to store on a PC or print, but the GUI does not provide a menu option to designate which photos will be cached. *See, e.g.*, Foster at [0022].
- **Montulli 1 and Montulli 2** – Both Montulli 1 and Montulli 2 fail to disclose or suggest automatically enabling upload via a cellular interface of the camera to a picture hosting service on the internet, and therefore, they fail to address periods of potentially increased cellular network access fees that can be associated with cellular data uploads. In fact, the one instance of cellular transfer in these references is not over the internet at all – instead, the phone transfers photos to a home-based server by calling “the server's modem and transmit[ting] data to the server over the POTS network.” Montulli 1 at [0024], Montulli 2 at [0021].
- **Allen** – Allen's uploads are manually initiated, for example, by the user speaking a “transmit” voice command – therefore, Allen fails to disclose automatic uploading at all, let alone the specific features of Applicant's claims. *See, e.g.*, Allen at 4:52-54.
- **Choi** – Choi also does not describe any automatic uploads over the internet, and instead purports to discuss manipulating files by voice commands while a camera is transmitting pictures to a computer. *See, e.g.*, Choi at [0043].
- **Brogan** – Brogan purports to describe a transmission by Bluetooth or WIFI (neither involving potentially increased cellular network access fees) that is manually initiated with a “transmit” soft button or physical button.
- **Safai** – Safai purportedly describes a process of uploading that requires multiple manual steps by the user, including manually selecting the photos and recipients, manually connecting the camera to a phone line, manually dialing through a modem to a remote recipient, and manually press a “send” button. *See e.g.*, Fig. 4E and 12:1-21.
- **Jung** – Because Jung does not describe cellular uploads at all, Jung fails to address

potentially increased network access fees and also fails to describe a camera automatically enabling uploads over the internet via a cellular interface.

- **Matsuura** – Matsuura requires connecting the camera to a proprietary, intermediary terminal for uploading – automatic uploads to the internet via an interface of the camera are not enabled.
- **Hunter** – In Hunter, a cell phone that is separate from the camera causes pictures to be sent across a telephone communication network in response to incoming or outgoing calls. *See, e.g., Hunter at [0041].* Thus, Hunter does not automatically enable upload during certain periods (or based on whether an internet connection is available) – it responds to specific user-triggered events.

#### **B. Undated Non-Patent literature**

A prospective licensee (now a licensee) provided the following undated non-patent literature references:

- Network Smart Capture Ver. 1.2 (date unknown) (Cite No. D054);
- Partial English Translation of Network Smart Capture Ver. 1.2 (date unknown) (“Network Smart Capture”) (Cite No. D055);
- Smart Commander Guide to Voice Recognition (date unknown) (“Smart Commander”) (Cite No. D053);
- Smart Capture Smart Commander (date unknown) (Cite No. D056); and
- Partial English Translation of Smart Capture Smart Commander (date unknown) (“Smart Capture”) (Cite No. D057);

The prospective licensee asserted that “Smart Commander Guide to Voice Recognition” and “Smart Capture Smart Commander” were publicly available in Japan in 1999, and “Network Smart Capture Ver. 1.2” was publicly available in Japan in 2002. Thus, out of an abundance of caution, Applicant cites and provides these references herewith. However, Applicant does not admit that any of these references were publicly available prior to Applicant’s effective filing date, nor admit that any of these references were ever “publicly available” as prior art within the meaning of 35 U.S.C. 102 or pre-AIA 35 U.S.C. 102.

Information Disclosure Statement & Remarks dated Oct. 25, 2019.

57. On August 27, 2020, applicant again submitted an IDS and Remarks attempting to distinguish various prior art references. For example, applicant argued:

The references numbered 1-10 below were raised in recent negotiations by prospective licensees of this application and related patents within the same family (this application and the related patents are referred to collectively as the “CEV Patents”). If the prospective licensee cited a specific portion of the reference, that portion of the reference is also identified below. The footnotes identify the claims of the CEV Patents that were alleged by the prospective licensee to have elements disclosed in the cited reference.

1. WO 2002-102072 to Kusaka;<sup>1</sup>
2. U.S. Patent 8,224,776 to Anderson et al. (“Anderson 2”);<sup>2</sup>
3. U.S. Pub. No. 2006/0031126 to Ma et al. (“Ma”);<sup>3</sup>
4. U.S. Pub. No. 2002/0103813 to Frigon (“Frigon”);<sup>4</sup>
5. U.S. Patent 5,844,599 Hildin (“Hildin”);<sup>5</sup>
6. U.S. Patent 6,005,610 to Pingali (“Pingali”);<sup>6</sup>
7. U.S. Patent 5,959,667 to Maeng (“Maeng”);<sup>7</sup>
8. JP H07-84302 to Kawamura (“Kawamura 1”) (FIG.3, oscillatory wave detecting sensor 19, microphone 20, earpiece 21, audio circuit 25, paragraphs [0027] and [0030]);<sup>8</sup>
9. JP H07-84311 to Kawamura (“Kawamura 2”) (FIG.3, sound input microphones 20, 21, audio circuits 39, 40, paragraph [0023]);<sup>9</sup>
10. JP H04-316035 to Yoshimura et al.<sup>10</sup>

#### **1. Item 1**

Item 1 is a PCT Publication written in Japanese, and it is a parent application of English language U.S. Pub. No. 2004/0145660 to Kusaka et al. (“Kusaka 1”) (Cite No. B069 in Applicant’s October 25, 2019 IDS). Applicant refers the Examiner to the October 25, 2019 IDS remarks in this Application that address in detail Applicant’s claimed distinctions over Kusaka 1, which Applicant believes are equally applicable to Item 1.

#### **2. Items 2-4**

As to Item 2 (Anderson 2), Applicant already cited herein and distinguished a related reference (WO 2002/008860 to Anderson, Cite No. B040 in Applicant’s October 25, 2019 IDS).

The disclosures of the two references are very similar, but nevertheless, Applicant addresses Anderson 2, along with Ma and Frigon, below.

The pending claims are in condition for allowance over Anderson 2, Ma, and Frigon.

Pending claim 21 element (f)(i) recites:

“a controller... configured to... receive, via the touch sensitive display, a user selection of *an upload option that instructs the camera system to confine automatic picture upload to periods without potentially increased cellular network access fees.*”

(emphasis added). And claim 21 (f)(ii) recites:

“a controller... configured to... *automatically connect to a picture hosting service that is internet-based and enable an upload to the picture hosting service,* over the internet and via the cellular interface, of a group of image sensor-captured pictures stored in the local memory, during *any period detected by the controller in which all three of the following conditions are met:*

(1) *the upload is allowed because the system is within one of the periods without potentially increased cellular network access fees,* as determined using data from the cellular interface,

(2) the system is connected to the internet via the cellular interface; and

(3) at least one image sensor-captured picture stored in the local memory has been designated through the touch sensitive display as part of the group of pictures to be uploaded to the picture hosting service.”

(emphasis added). Elements (f)(i) and (f)(ii) of independent claim 25 include similar limitations.

Like the other references of record in this Application, Items 2-4 all fail to disclose or obviate “an upload option that instructs the camera system to confine automatic picture upload to periods without potentially increased cellular network access fees.” Furthermore, none of these references describes, as a condition for upload, the controller determining “the upload is allowed because the system is within one of the periods without potentially increased cellular network access fees, as determined using data from the cellular interface” and that the controller automatically enables upload of designated photos to the picture hosting service when this condition and the other conditions are met.

Anderson 2 (Item 2) does not address periods of potentially increased cellular network access fees or how uploads should be handled during such periods. With respect to fees, Anderson 2 at 5:56-67 says that a photo sharing service can share revenue with a wireless service provider, but nothing about varied network access fees or avoiding uploads during expensive fee periods. Moreover, Anderson 2 requires the user to manually initiate an upload with a “send”

button or otherwise establish the internet connection manually, so the device in Anderson 2 does not automatically connect and upload, as recited by Applicant's claims. Anderson at 9:55-62, Figure 4A.

Ma (Item 3) teaches to avoid altogether the cellular network because of fees and other purported complications associated with cellular uploading. *See e.g.*, Ma at [0056] (stating "[t]he invention obviates the use of a cellular phone system to upload photos....Cellular telephone services, used by mobile phones, also require complex telecommunication protocols including dialing up the system, transmitting cellular phone signals and other processes that take time, resources, cost money in air time and fees, and are generally cumbersome for a user who simply wants to upload photograph information...."). Thus, the device in Ma uses an internet-connected Kiosk to upload instead of the cellular network. *See e.g.*, Ma at [0024]. Accordingly, because Ma avoids cellular uploads, Ma does not disclose or obviate (1) "a controller [of the camera]... configured to... **automatically** connect **...via the cellular interface**," (2) "an upload option that instructs the camera system to confine automatic picture upload to periods without potentially increased cellular network access fees," or (3) determining "the upload is allowed because the system is within one of the periods without potentially increased cellular network access fees," as recited in Applicant's claim 21.

In addition, Ma's uploads are not initiated **automatically** by the camera's controller in response to detecting an internet signal. The Ma user physically takes his camera to a specific physical location of a terminal, **manually** logs in to that terminal, and that terminal (not the camera) is programmed to transmit photos to certain "predetermined locations." *See e.g.*, Ma at [0081] (stating "[a]n interface terminal may be located in a central location where a user may have access, and the user can go to the location of the interface terminal to upload the desired data....Such an interface terminal may include a keyboard and a screen, possibly a touchscreen without a keyboard, **which allows a user to input the user information into the system**, upload the data, and allow the unique system to automatically transmit the data to predetermined locations, such as emailing photos to predetermined email addresses.").

Frigon (Item 4) is completely silent on cellular network access fees and potentially increased cellular network access fees. Accordingly, Frigon also not disclose or obviate (1) "an upload option that instructs the camera system to confine automatic picture upload to periods without potentially increased cellular network access fees," or (2) as a condition for upload, the



device determining “the upload is allowed because the system is within one of the periods without potentially increased cellular network access fees” as recited in Applicant’s claim 21.

Additionally, Frigon does not say that the client computer includes a camera for capturing pictures that are shared. Further, the controller of Frigon’s client computer does not automatically connect and upload based on conditions (such as an internet connection condition).

The client computer connects in response to manual *user* clicks. Frigon states at [0068]:

When the user has completed identifying people in the photo 34 and, if desired, their coordinates, the browser on the user computer 100 sends the user identifier, the image identifier, and any coordinates, all of which are embedded in the form, back to the host computer 200. This can be done automatically *after the user clicks a certain number of times* or *manually after the user clicks the Submit button 38*.

For at least the above reasons, the currently pending claims clearly distinguish Anderson 2, Frigon, and Ma (Items 2-4 from the list above).

### **3. Items 5-10**

The prospective licensees cited Items 5-10 for elements of CEV Patent 7,687,827 describing a camera having “at least two microphones” and “a voice-recognition unit” that “is configured to apply a voice-recognition algorithm based on the energy detected at each of two microphones.” The present claims do not recite two microphones or voice recognition. Moreover, the prospective licensees that provided Items 5-10 did not assert that these references disclose or render obvious any “automatic upload” features of the claims. Applicant has reviewed the U.S. patents and the machine translations of the Japanese references to confirm the same – it does not appear that Items 5-10 contain any disclosure related to automatic picture upload. Accordingly, Applicant does not believe Items 5-10 are relevant to the important features of the pending claims but advises the Examiner to independently review the references.

The Japanese publications (Items 8-10) are written in Japanese, and the prospective licensee did not provide English translations. The English translations available to Applicant are “machine translations” generated by the Japanese Patent Office. The “machine translations” are not certified translations completed by a qualified translator, but rather, should be treated as rough translations created by a computer translation system. The machine translations also do not include any translation of the figures and, because they are computer generated, they include text and grammar that is nonsensical in places.

Information Disclosure Statement & Remarks dated Aug. 27, 2020.

58. Applicants submitted a second IDS and remarks on August 27, 2020 arguing that other prior art of record is distinguishable from the then-pending claims. For example, applicants argued the following:

The references numbered 1-7 below were raised in recent negotiations by prospective licensees of this application and related patents within the same family (this application and the related patents are referred to collectively as the “CEV Patents”). The specific portions of the references cited by the prospective licensee are identified below. The footnotes identify the claims of the CEV Patents that were alleged by the prospective licensee to have elements disclosed in the cited reference.

1. U.S. Pub. No. 2006/0114338 to Rothschild (“Rothschild”) (Claim 1, Claim 10, Paragraphs [0025]-[0027], [0029], [0047], [0050], [0051]);<sup>1</sup>

2. U.S. Patent 6,636,259 to Anderson et al. ("Anderson") (3:24-49, 6:7-21, 9:11-17, 10:1-14, 10:47-52, 11:37-50);<sup>2</sup>
3. U.S. Patent 7,468,744 to Edwards et al. ("Edwards") (3:54-61, 4:29-67, 5:41-54, 6:40-54, 7:13-26, 8:19-31, 8:44-9:3);<sup>3</sup>
4. U.S. Patent 6,715,003 to Safai ("Safai") (Claim 189, Fig. 2, Paragraphs [0052], [0056], [0057], [0059], [0063], [0069], [0083], [0087], [0098], [0100], [0101], [0104], [0169], [0180]);<sup>4</sup>
5. U.S. Pub. No. 2005/0168579 to Imamura ("Imamura") (Fig. 6, Paragraphs [0039], [0040], [0057], [0064], [0069], [0070], [0072], [0073]);<sup>5</sup>
6. JP 2000214525 to Yoji ("Yoji") (Claim 1, Paragraphs [0009], [0014], [0017], [0041], [0108], [0109], [0112], [0115]);<sup>6</sup>
7. TW 200520512 to Liu et al. ("Liu") (8:17-24, 9:1-18).<sup>7</sup>

#### 1. Items 1-4

Applicant and the Examiner addressed both Rothschild and Anderson during prosecution of related applications. For that reason, Applicant already cited these references in a previous IDS in this Application (Rothschild as Cite No. B051 and Anderson as Cite No. A079 with Applicant's October 25, 2019 IDS).

Specifically, for Rothschild, Applicant refers the examiner to page 10 of the October 25, 2019 IDS Remarks, which explains why the present claims distinguish Rothschild.

For Anderson, the Examiner cited Anderson as "pertinent but not relied upon" in Application No. 15/188,736 (now US Patent No. 9,936,116) and Application No. 14/950,370 (now US Patent No. 10,063,761).<sup>8</sup> Thus, the examiner reviewed Anderson but determined that it

<sup>2</sup> Alleged to disclose elements of CEV Patent 9,936,116 – Claim 1.

<sup>3</sup> Alleged to disclose elements of CEV Patent 9,936,116 – Claim 1.

<sup>4</sup> Alleged to disclose elements of CEV Patent 8,923,692 – Claim 1.

<sup>5</sup> Alleged to disclose elements of CEV Patent 9,936,116 – Claim 1 and CEV Patent 10,257,401 – Claim 1.

<sup>6</sup> Alleged to disclose elements of CEV Patent 7,687,827 – Claims 3 and 22, CEV Patent 8,923,692 – Claim 1, and CEV Patent 10,257,401 – Claim 1.

<sup>7</sup> Alleged to disclose elements of CEV Patent 7,687,827 – Claim 22.

<sup>8</sup> See FOA, Application No. 15/188,736, (June 19, 2017); NFOA, Application No. 14/950,370 (June 20, 2017).

was not relevant enough to be included as part of any prior art rejection of the claims in related applications.

Like the claims in related applications, the currently pending claims distinguish Anderson, because Anderson does *not* disclose or obviate “an upload option that instructs the camera system to confine automatic picture upload to periods without potentially increased cellular network access fees” as recited in independent claims 21 and 25. Furthermore, Anderson does not describe, as a condition for upload, the controller determining “the upload is allowed because the system is within one of the periods without potentially increased cellular network access fees, as determined using data from the cellular interface” and that the controller automatically enables upload of designated photos to the picture hosting service when this condition and the other conditions are met.

Anderson does not address periods of potentially increased cellular network access fees or how uploads should be handled during such periods. With respect to fees, Anderson at Col. 10, lines 47-52 describes simply that a user can call a dedicated server rather than being billed for an ISP connection. This says nothing about varied network access fees or avoiding automatic uploads during expensive fee periods. Moreover, Anderson requires the user to manually initiate an upload with a “send” button or “continue” button, and to establish the internet connection manually, so the device in Anderson does not automatically connect and upload when all of the indications are received, as recited by Applicant’s claims. Anderson at Col. 11, Lines 37-50.

Applicant recently received Edwards for the first time, and it is therefore cited on the attached form SB-08 as Cite No. A091. The currently pending claims distinguish Edwards too. Edwards says absolutely nothing about cellular network access fees, confining automatic uploads to periods without potentially increased cellular network access fees, or automatically enabling automatic uploads based on present network conditions. In fact, the only relevant factors for whether to attempt upload in Edwards are (1) whether the amount of data has exceeded a predetermined threshold for transfer or (2) whether a user has initiated upload.

Edwards says (at 8:39-43):

transfer manager 416 may monitor data buffers 422 and automatically initiate an arbitration procedure *when the amount of data 514 in data buffers 422 exceeds a predetermined threshold*. Alternately, transfer manager 416 may initiate an arbitration procedure in response to system user input.

Applicant also recently received Safai for the first time, and it is therefore cited on the attached form SB-08 as Cite No. A092. Safai discloses a *manual* upload process initiated by the user (i.e., not automatic) that also (1) requires the user to make a physical connection to an intermediate device for uploading and (2) does *not* occur “over the internet and *via the cellular interface*” of the camera nor consider “cellular network access fees.”

Paragraph [0180] of Safai says that the camera upload occurs by: “prompting the user to connect a cable between modem 214 of the camera 100 and a telephone line that is coupled to network 806; automatically dialing a pre-defined telephone number that is associated with modem 804; and carrying out handshaking or other communications between modem 214 and modem 804.” See also, Safai at [0101] (“the user is expected to connect a cable from the camera to a telecommunication device or network.”). Accordingly, Safai *does not disclose uploading pictures using the cellular interface of a camera at all*, let alone doing so automatically during any period in which certain conditions are met, as recited in independent claims 21 and 25. For the same reason, Safai does not disclose the claim elements that recite “an upload option that instructs the camera system to confine automatic picture upload to periods without potentially increased cellular network access fees” nor the controller determining, as a condition for upload, that “the upload is allowed because the system is within one of the periods without potentially increased cellular network access fees, as determined using data from the cellular interface.”

In fact, Safai confirms that its user manually causes uploads, rather than a controller automatically enabling upload when conditions are met, because Safai always requires the user to press a “send” button at the time of the upload.

- Safai [0098]: “After selecting one or more images, providing one or more intended recipient addresses, and optionally recording a message, an image transport confirmation screen 458 is displayed, as illustrated in FIG. 4G. The confirmation screen 458 includes a confirmation box 460, a Cancel button 415a, a Back button 415b, *a Send button 462*, and a Send Later button 464.”
- Safai [0101]: “The user may *select the Send button 462*, Cancel button 415a, or the Back button 415b. *A user may dispatch the selected images to the entered addresses by selecting the Send button 462* of the confirmation screen 458.”
- Safai [0104]: “As discussed above, *when the Send button 462 is selected*, in response, the transport application sends the selected photos to the destination address indicated in the confirmation box 460.”
- Safai [0180]: “*Block 1220 indicates that a SEND NOW option has been selected* using software elements of camera 100. In block 1222, camera 100 opens a network

connection to server 801. This may involve: *prompting the user to connect a cable between modem 214 of the camera 100 and a telephone line that is coupled to network 806*; automatically dialing a pre-defined telephone number that is associated with modem 804; and carrying out handshaking or other communications between modem 214 and modem 804.”

For at least the above reasons, the currently pending claims clearly distinguish Rothschild, Anderson, Edwards, and Safai (Items 1-4 from the list above).

## 2. Items 5-7

Applicant and the Examiner addressed both Imamura and Yoji during prosecution of related applications. For that reason, Applicant already cited and provided these references in a previous IDS in this Application (Imamura as Cite No. B035, Yoji as Cite No. C021, and Yoji’s Machine Translation as Cite No. D051 with Applicant’s October 25, 2019 IDS).

Liu (Item 7) is written in Chinese, and the prospective licensee did not provide an official English translation. The English translation available to Applicant is a “machine translation” generated by Google. The “machine translation” is not a certified translation completed by a qualified translator, but rather, should be treated as a rough translation created by a computer translation system. The machine translation also does not include any translation of the figures and, because it is computer generated, it includes text and grammar that is nonsensical in places.

Therefore, the Examiner is advised that Applicant’s explanation is based on a machine translation, and that translation may be incomplete and possibly inaccurate in places.<sup>9</sup> Applicant cites Liu (Cite No. C046) and its translation (Cite No. D117) on the attached Form SB-08 and provides copies of both herewith.

The prospective licensee cited Imamura, Yoji, and Liu for elements of related CEV patents describing a camera having “a voice-recognition unit/voice recognizer” and a microphone, and that is configured to receive and recognize voice commands.

The present independent claims do not recite microphones or voice recognition. Moreover, the prospective licensee that provided Imamura, Yoji, and Liu did not assert that these references disclose or render obvious any “automatic upload” features of the claims. Applicant has reviewed the U.S. publication and the machine translations to confirm the same – it does not appear that Imamura, Yoji, or Liu contain any disclosure related to automatic picture upload.

Accordingly, Applicant does not believe Imamura, Yoji, or Liu are relevant to the important features of the pending claims but advises the Examiner to independently review the references.

Information Disclosure & Remarks dated Aug. 27, 2020.

59. On September 29, the applicant submitted another IDS with remarks. The applicant again argued that the claims were distinguishable over the prior art. For example, the applicant argued:

The references numbered 1-4 below were raised in recent negotiations by a prospective licensee of this application and related patents within the same family (this application and the related patents are referred to collectively as the "CEV Patents"). The specific portions of the references cited by the prospective licensee are identified below. The prospective licensee alleged that the cited references disclose elements of CEV Patent 10,063,761 Claim 1.

1. U.S. Patent 7,468,744 to Edwards et al. ("Edwards") (1:17-19, 3:44-49, 3:56-58, 4:19-23, 4:44-50, 4:54-60, 5:21-23, 5:49-53, 6:55-62, 7:22-26, 8:32-43);



2. U.S. Patent 6,715,003 to Safai ("Safai") (3:21-22, 5:8-14, 6:10-14, 6:22-28, 7:10-13, 7:39-43, 8:11-14, 8:27-32, 15:18-20, 15:27-32, 22:53-58, 22:59-64, 27:58-60, 27:65-68, 28:1-6);
3. U.S. Patent 6,636,259 to Anderson et al. ("Anderson") (3:24-29, 4:47-52, 6:10-13, 11:37-50);
4. KR 2004/0065987 to Matsufune ("Matsufune") ([0044]-[0046], [0051], [0056], [0080], [0082]).

Applicant discussed Edwards, Safai, and Anderson (Items 1-3), and explained why Applicant believes that the present claims are allowable over those references, in an IDS filed herein on August 27, 2020. Applicant refers the Examiner to the discussion of Items 1-3 in the August 27, 2020 IDS and IDS Remarks.

Matsufune (Item 4) is written in Korean, and the prospective licensee did not provide an official English translation. The English translation available to Applicant is a "machine translation" generated by the European Patent Office. The "machine translation" is not a certified translation completed by a qualified translator, but rather, should be treated as a rough translation created by a computer translation system. The machine translation also does not include any translation of the figures and, because it is computer generated, it includes text and grammar that is nonsensical in places.

Therefore, the Examiner is advised that Applicant's explanation is based on a machine translation, and that translation may be incomplete and possibly inaccurate in places.<sup>1</sup> Applicant cites Matsufune (Cite No. C047) and its translation (Cite No. D118) on the attached Form SB-08 and provides copies of both herewith.

Based on the available translation, it appears that the Matsufune reference fails to remedy the deficiencies of the prior art of record at least because it does not disclose or suggest elements (f)(i) or (f)(ii) of claim 21. Pending claim 21 element (f)(i) recites:

"a controller... configured to... receive, via the touch sensitive display, a user selection of *an upload option that instructs the camera system to confine automatic picture upload to periods without potentially increased cellular network access fees.*"

(emphasis added). And claim 21 (f)(ii) recites:

“a controller... configured to... *automatically connect to a picture hosting service that is internet-based and enable an upload to the picture hosting service*, over the internet and via the cellular interface, of a group of image sensor-captured pictures stored in the local memory, during *any period detected by the controller in which all three of the following conditions are met*:

(1) *the upload is allowed because the system is within one of the periods without potentially increased cellular network access fees*, as determined using data from the cellular interface,

(2) the system is connected to the internet via the cellular interface; and

(3) at least one image sensor-captured picture stored in the local memory has been designated through the touch sensitive display as part of the group of pictures to be uploaded to the picture hosting service.”

In contrast with the pending claims, the Matsufune machine translation says at [0055]-[0056] that “customer A” *manually* uploads video content:

[0055] And *customer A* can upload video content to ISP 2 using an access account that has already been granted.

[0056] In this case, when the ISP 2 is a connection from the video camera 1, the connection fee may be set to be free or a connection fee lower than normal.

See also, Matsufune at [0059]: “The *customer A* uploads the captured image content to the content server 2A linked to the web site.”

Thus, Matsufune purportedly describes customer A initiating and controlling when upload occurs. Moreover, Masufune’s description of a user purportedly always using the ISP 2 account is not “a user selection of an upload option that instructs the camera system to confine automatic picture upload to *periods without potentially increased cellular network access fees*.” Masufune’s user is apparently instructing the device to always use the same account. Applicant sees no disclosure in Matsufune of monitoring access fees during multiple periods of time and then automatically uploading because “the upload is allowed because the system is within one of the periods without potentially increased cellular network access fees, as determined using data from the cellular interface” (in other words, Masufune’s device does not appear to be monitoring whether the device is in a period without potential cellular network access fees and automatically uploading during appropriate periods).

In short, Matsufune purportedly uploads video at the time customer A initiates the upload, and because the customer has an account with the ISP 2, Matsufune’s customer A is

purportedly charged no fees or reduced fees. Based on the machine translation, Applicant does not believe that Matsufune discloses the critical elements of pending claim 21.

In view of the above, Applicant believes that all of the pending claims (pending claim 21 and its dependencies) are in condition for allowance over the art. If the Examiner has any questions, please contact the undersigned at your convenience.

Information Disclosure Statement & Remarks dated Sep. 29, 2020.

60. On February 1, 2021, the examiner rejected the claims on section 112 and double patenting grounds. *See* Non-Final Rejection dated Feb. 1, 2021.

61. The applicant and examiner conducted an interview on June 11, 2021, and the applicant also responded to the examiner's rejections on June 11, 2021. *See* Response to Non-Final Rejection dated June 11, 2021. For example, the applicant argued as follows:

#### **REMARKS**

Applicant is in receipt of the Examiner's February 1, 2021 Non-Final Office Action ("NFOA"). Claims 21-28 are currently pending.

##### **I. Examiner Interview Summary**

Counsel of record Justin Lesko, the inventor Jeff Konicek, and the Examiner Rodney Fuller conducted an interview on June 11, 2021. During the interview, Applicant and the Examiner discussed the NFOA's Section 112 Written Description rejection. Applicant presented in outline format the explanation for claim support provided in Section II of this response below.

In view of Applicant's explanation, the Examiner agreed that the claims are fully supported and the Section 112 rejection will be withdrawn. The Examiner indicated that if Applicant submits the explanation for written description support and terminal disclaimers to overcome the double patenting rejections, this application is in condition for allowance.

To obviate the double patenting rejections based on U.S. Patent Nos. 9,936,116 and 10,063,761, Applicant files herewith two Forms PTO/AIA/26 (Terminal Disclaimer to Obviate a Double Patenting Rejection Over a "Prior" Patent), along with the required fees.

##### **II. Applicant's Response to the Section 112 Written Description Rejection**

"The subject matter of the claim need not be described literally (i.e., using the same terms or *in haec verba*) in order for the disclosure to satisfy the description requirement." M.P.E.P. 2163.02. Instead, the question is whether the specification conveys with *reasonable* clarity to those skilled in the art that the applicant was in possession of the claimed invention. M.P.E.P. 2163(I)(B), citing *Vas-Cath, Inc.*, 935 F.2d at 1563-64.

"Factors to be considered in determining whether there is sufficient evidence of possession include the level of skill and knowledge in the art, partial *structure*, physical and/or chemical properties, *functional characteristics* alone or *coupled with a known or disclosed correlation between structure and function*, and the method of making the claimed invention. Disclosure of any combination of such identifying characteristics that distinguish the claimed invention from other materials and would lead one of skill in the art to the conclusion that the applicant was in possession of the claimed species is sufficient." *See Eli Lilly*, 119 F.3d at 1568 (emphasis added). Also, the description needed to satisfy the requirements of 35 U.S.C. 112

"varies with the nature and scope of the invention at issue, and with the scientific and technologic knowledge already in existence." *Capon v. Eshhar*, 418 F.3d at 1357.

Applicant responds to each of the NFOA's points below.

**A. The touchscreen elements are supported.**

*The NFOA asserts:* "The specification sets forth multiple inventions and teaches a 'touch sensitive display' in paragraph 22. The claims correspond to an invention that is set forth in paragraphs 36 - 38. ..."; "There is no disclosure of the touch sensitive display used to select an upload option or a user-selectable input related to upload periods"; and "There is no disclosure that the touch sensitive display is used to select photos to be uploaded."

*Applicant's Response:* The specification directly couples known touchscreen LCDs with the functions of camera control and menu selection as claimed.

First, the specification describes the touchscreen LCD allowing the user of the system to "interact with menus, features, and functions displayed on the LCD display" and "control the camera system" through touch:

**Para. 22** - Another aspect of the present invention provides that the camera LCD display (FIG 1, element 14) employs touch sensitive technology. This technology is well known in the computer art and can be any of resistive, capacitive, RF, etc touch technology. This aspect of the present invention ***allows the user to interact with menus, features and functions*** displayed on the LCD display directly rather than through ancillary buttons or cursor control....

**Para. 31** - [T]he user can interact with the camera through touch, voice, and gaze (i.e., sight) to manipulate menus, ***control the camera system***, compose the shot, focus, zoom, enable/disable flash, select macro or panoramic camera modes, etc.

Thus, the specification expressly instructs one skilled in the art to interact via touch technology with menus on the LCD to control camera features and functions. These camera functions include automatic upload functions, as the touchscreen control is not described as being separate or excluded from other camera features. To the contrary, the specification specifically states that the touch input aspects of the invention should be combined with other features for "the control of camera menus, ***camera features, camera options***, camera settings, commanding picture taking, enabling flash, etc."

**Para. 45** - *Additionally, not all aspects of the invention need to be practiced together, it is contemplated that subsets of the disclosed aspects of the present invention may be practiced in an embodiment and still be within the scope of*

*the present invention*.... Combining various aspects of the invention herein disclosed, such as voice recognition, *touch input*, gaze tracking, etc *for camera control* provides much more natural and human interfacing to the camera system for the control of camera menus, *camera features*, *camera options*, camera settings, commanding picture taking, enabling flash, etc.

The specification even discloses using the LCD display (which is the touch-sensitive display, as described in Para. 22) with cellular upload:

**Para.37** - In a second preferred embodiment of this aspect of the invention, the inventive camera system is equipped with software and hardware coupled to the camera controller allowing independent communication with a computer network for the primary purpose of communicating its pictures over the internet... Alternatively, the invention contemplates the use of ... cellular data networks ... as the interconnection technology (FIG. 3, element 46b) used by the inventive camera system.... *The camera system LCD display serves the purpose of displaying internet webpages when the user is navigating the internet in addition to its function as the camera display. So equipped*, the inventive camera system can now independently upload its pictures to any of the internet-based photo printing services, such as those provided by Walmart.com, Walgreens.com, Kodak.com, etc., without the need for first storing the photos to a computer system and then connecting the computer system to the internet to upload the pictures.”

Thus, “so equipped” with the previously described LCD touchscreen display, Para. 36 teaches that “[t]he camera system preferably includes the ability for the user to *indicate* to the camera which pictures to offload so that the camera offloads only those pictures that are so *indicated by the user*,” this “indicating” can be the disclosed method of selecting a menu option on a touchscreen to control the camera.

Similarly, Paragraph 38 describes *user instructions* for the upload, which can happen via the disclosed touchscreen. There, the specification says that the system is “*operable for being instructed* to automatically initiate a connection to the internet whenever the predetermined conditions are met and it is in range of the network connection” and “[a]dditionally ... *operable* so that the automatic connection is made only at certain times of the day or weekends, etc., so as to confine picture transmission to periods of low network usage or periods of cheaper network access, etc.” The specification uses the word “operable” in describing user instructions to the camera system. As explained above, the specification explicitly describes that such instructions are sent via the touchscreen.

Also, in Fig. 3 The LCD touchscreen display 42 is shown as an input to the camera controller 40 that handles “other camera control” 50. In other words, Fig. 3 shows the

interconnection between the LCD touchscreen input and “other” functions, such as upload functions.

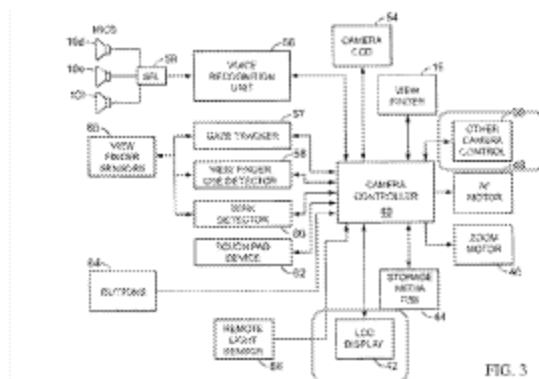


FIG. 3

#### B. The specification discloses the claimed conditions for upload.

*The NFOA asserts:* “The description only supports the automatic connection upload when two conditions are met (1) ‘it has a predetermined number of pictures’ and (2) ‘can so connect’. Thus, the disclosure does not support the conditions of automatic upload set forth in claims 21 and 25.”

*Applicant’s Response:* The NFOA is incorrect, and all of the claimed conditions for upload are supported.

The specification describes photo offloading as an “aspect of the present invention” and that offloading occurs when “a *set* of predetermined conditions, *such as* day, time, number of pictures to offload, *etc.*, are met.”

**Para. 36** - Once a user of a camera has taken pictures, typically he will wish to print or otherwise develop the pictures for viewing, framing, etc. **Another aspect of the present invention provides for simpler photo offloading from the modern digital camera when a set of predetermined conditions, such as day, time, number of pictures to offload, etc., are met.** The camera system preferably includes the ability for the user to indicate to the camera which pictures to offload so that the camera offloads only those pictures that are so indicated by the user....

Thus, the specification expressly states that upload is dependent on a *set* of conditions.

Under the broadest reasonable interpretation, a “set” of conditions is certainly not limited to just two conditions, and can include 3, 4, 5 or even 10+ conditions. Therefore, the number of conditions would be limited to two conditions *only* if the specification expressly limited the scope of the term “set” in some way. But the specification describes the “set” expansively, consistent with its BRI. Specifically, the inventor confirms that the “set of predetermined conditions” clearly includes greater than two conditions by: (1) expressly introducing the list with “such as”, (2) listing *three* examples of conditions (different from the two in the NFOA), and (3) adding the *open-ended* phrase “etc.” Moreover, as discussed below, the specification expressly describes numerous additional conditions associated with the upload process in Paragraphs 36 (“day, time, number of pictures to offload, etc.”, “user ... indicate[s] to the camera which pictures to offload”), 37 (upload over the cellular network), 38 (“whenever the predetermined conditions are met,” “it is in range of the network connection,” “confine[d]...to periods of cheaper network access”) and 48 (“time, date, status of equipment, etc.”).

As to the user “designation” of photos being a condition, as shown above, the user designating photos is discussed right next to the discussion of conditions in para. 36. In that embodiment, “the camera offloads *only* those pictures that are so indicated by the user.” Thus, “designation” of pictures is *in fact* a condition for upload (and discussed in that section) because if no pictures are designated, no upload will occur.

Para. 37 describes this same upload “aspect of the invention” in which the pictures are uploaded over the cellular network:

**Para. 37** - In a second preferred embodiment of *this aspect of the invention*, the inventive camera system is equipped with software and hardware coupled to the camera controller allowing independent communication with a computer network for the primary purpose of communicating its pictures over the internet.... [T]he invention contemplates the use of ... *cellular data networks*, etc. as the interconnection technology (FIG. 3, element 46b)....

Para. 38 describes this “aspect of the invention” too, emphasizing that “the inventive camera system is operable for being instructed to automatically initiate a connection to the internet, LAN, printer, etc. *whenever the predetermined conditions* are met and it is in range of the network connection, (e.g., WIFI, Bluetooth, wireless USB, wired LAN, etc).” As this is an “enhancement” to the “above-disclosed” upload “aspect” (of Para. 36), Para. 38 is certainly *not* limiting automatic upload to just two conditions, as suggested by the Examiner. Instead, Para. 38



of the specification clearly refers to and further explains the expansive “predetermined *conditions*” (plural) referenced in Para. 36.

Para. 38 also describes that upload can be “*confine[d]*...to periods of cheaper network access.” Without doubt, a person of skill in the art would readily understand that the upload is *conditioned* upon (i.e., confined to) the current status of the network costs. This also is clearly one of the possible “conditions” for upload, even if it is not explicitly called a “condition” in para. 36 above. In other words, network access fees are one of the “etc.” conditions contemplated by the specification.

Par. 48 emphasizes again that the set of predetermined rules or conditions for automatic upload is expansive and includes “status of equipment” (which can be used to determine if the device is in one of the periods without potentially increased cellular network access fees) as one of the upload conditions:

It is further contemplated that certain aspects of the presently disclosed invention have application beyond those disclosed herein.... *As an example, automatically connecting to the internet when a set of predetermined rules or conditions (such as time, date, status of equipment, etc) is met* would be useful for the download/upload of information from/to the internet, like music, video, etc. for processing, storage, transmission to another party, etc..

Thus, in fact, all four of the conditions set forth in the claim are expressly supported and described in the specification.

**C. The specification discloses “the upload is allowed because the system is within one of the periods without potentially increased cellular network access fees, as determined using data from the cellular interface” and “the controller has confirmed that the camera system is within a period without potentially increased cellular network access fees, as determined using data from the cellular interface.”**

*The NFOA asserts:* “There is no disclosure of determining a period based on data from the cellular Interface.”

*Applicant’s Response:* The NFOA is incorrect.

The specification expressly describes that upload can be confined to “periods of cheaper network access,” that the device can be a cellular phone with known structures for accomplishing that task, and that “status of equipment” is used by the cellular phone to make the upload determination, as previously confirmed by the Examiner.

In a related application, Applicant addressed the disclosure in para. 38, and the Examiner agreed that a similar claim element was supported. Specifically, during prosecution of Application No. 15/188,736 (US Patent No. 9,936,116), Applicant amended the claims to recite:

(f) the controller configured to... (ii) receive, via the touch sensitive display, a user selection of *an upload option that instructs the device to confine automatic picture upload* to periods without potential cellular network access fees; and

(iii) automatically upload designated pictures... only if predetermined conditions are met, the predetermined conditions including at least the controller receiving: (1) *an indication from the cellular interface that the upload is acceptable based on the selected upload option*;

Applicant explained that para. 38 supports these elements, which distinguish the prior art, and the Examiner agreed. *See* December 5, 2017 Interview and December 11, 2017 Amendment.

Para. 38 says explicitly that picture transmission is confined to “periods of low network usage or periods of cheaper network access.”

In an enhancement to the above-disclosed embodiments of this aspect of the invention, the inventive camera system is operable for being instructed *to automatically initiate a connection to the internet*, LAN, printer, etc. whenever the predetermined conditions are met and it is in range of the network connection, (e.g., WIFI, Bluetooth, wireless USB, wired LAN, etc)... Additionally, the inventive camera system is preferably operable so that the automatic connection is made only at certain times of the day or weekends, etc., *so as to confine picture transmission to periods of low network usage or periods of cheaper network access, etc.*... In the second embodiment above, the inventive camera system automatically connects to the internet preferably via WIFI, although cellular network, etc. connection is also contemplated, when it has a predetermined number of pictures and can so connect, and will send the pictures to virtually any internet destination without user intervention. For example, the inventive camera system can be instructed to automatically send the pictures to an email account, internet picture hosting site, web-based photo printing site, the user's internet-connected home computer (*when he is on vacation*, for instance), etc. In this way, valuable pictures are immediately backed-up and the need for reliance on expensive camera storage media like flash cards, SD, etc. is greatly reduced.

Applicant's disclosure also ties the above-referenced automatic upload embodiment to cameras in cellular phones, while acknowledging the fees charged by cellular service providers. The specification says at Para. 44:

Additionally, *other aspects of the present invention taught for the improved camera system are applicable to the improved cell phone* herein disclosed.... The aspect of the invention allowing for automatic connection to a LAN or the internet is also contemplated for use with *cell phone cameras*. This aspect of the invention ameliorates the prior art storage space limitation which severely hampers the utility of the cell phone camera. *Cellular service providers typically charge a fee for internet access* or emailing and so an automatic feature to connect to the net or send email for the purposes of transmitting pictures can improve revenue generation for these companies.

Thus, the specification describes that (1) the cellular device can be instructed to confine uploads to "periods of cheaper network access" and (2) cell service providers charge network fees.

In addition, para. 48 of applicant's specification emphasizes "status of equipment" (e.g., network equipment) as one of the possible conditions for upload:

It is further contemplated that certain aspects of the presently disclosed invention have application beyond those disclosed herein.... *As an example, automatically connecting to the internet when a set of predetermined rules or conditions (such as time, date, status of equipment, etc) is met* would be useful for the download/upload of information from/to the internet, like music, video, etc. for processing, storage, transmission to another party, etc.

"Periods of cheaper network access," as discussed in Para.38, can be determined via "status of equipment" because the device receives cellular network information from equipment on the cellular network. As an example at the time of the invention (known to a PHOSITA), equipment on the network indicates to the cellular phone (through its cellular interface) that the device is roaming on a more-expensive non-provider network. This roaming period would *not* be "one of the periods without potentially increased cellular network access fees," and upload is prevented during this particular period.

Thus, as previously found by the Examiner for a similarly-worded claim, there is express support in the specification for the language of claim 21. Moreover, it is established law that in *haec verba* disclosure is not required and the question is whether the specification conveys with reasonable clarity to those skilled in the art that the applicant was in possession of the claimed invention," as explained above.

Response to Non-Final Rejection dated June 11, 2021 at 2–9.

62. The claims were allowed on July 20, 2021. *See* Notice of Allowance dated July 20, 2021.

**iii. '116 Patent File History**

63. I have also reviewed the file history of U.S. Patent No. 9,936,116 (the “’116 Patent”) (Application No. 15/188,736) (CEV-0033232–0033954). A brief summary based on my understanding is below.

64. The applicant filed the application leading to the ’116 Patent on June 21, 2016 and amended the claims as follows:

**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application.

1 – 20. (Canceled)

21. (New) A camera system comprising:

(a) a camera that is operable to take and store pictures, and that includes: (i) a lens, (ii) an image sensor, (iii) at least one microphone, (iv) a voice recognizer, (v) a controller, (vi) a WIFI interface, and (vii) a touch sensitive display;

(b) the controller including a control program having instructions to control and respond to the voice recognizer;

(c) the voice recognizer coupled to the at least one microphone and the controller, and configured to receive and process sounds into recognized words;

(d) the camera further configured to maintain and store a plurality of recognizable words having different plain meanings and commonly associated with taking a picture, the recognition of any of which will cause the camera to take a picture;

(e) wherein the voice recognizer is operable to receive a first and a second human sound spoken by the same person, and the voice recognizer is operable to recognize:

(i) the first human sound as a first human spoken word from among the plurality, the recognized first human spoken word being assigned by the control program to be a command for the camera to take a picture, and

(ii) the second human sound as a second human spoken word from among the plurality, the recognized second human spoken word being different from the first human spoken word and also assigned by the control program to be the same camera command to take a picture;

(f) the controller configured to:

(i) cause the camera to take a picture in response to the voice recognizer recognizing either the first or second human spoken word and to store the picture in a local memory in the camera; and

(ii) automatically upload the picture stored in the local memory of the camera via the WIFI interface and an internet connection to a location at an internet picture hosting website

as instructed by a user of the camera, but only if predetermined conditions are met, the predetermined conditions including at least the controller receiving:

- (1) an indication from the WIFI interface that the system can make an internet connection via the WIFI interface; and
- (2) an indication from the local memory that a user has elected an option to designate at least one picture stored in the local memory to be uploaded to the internet picture hosting website.

22. (New) The camera system of claim 21 wherein the system further comprises a cell phone.
23. (New) The camera system of claim 22 wherein the controller is configured to determine if the recognized word is for one of either camera operation or cell phone operation.
24. (New) The camera system of claim 22 wherein the voice recognizer is configured to recognize at least one spoken word to control dialing of the cell phone.
25. (New) The camera system of claim 22 wherein the voice recognizer is configured to recognize spoken words in association with text messaging over the cell phone.
26. (New) The camera system of claim 21 wherein the controller is further configured to execute an internet browser program and display the internet picture hosting website on the touch sensitive display.
27. (New) The camera system of claim 21 wherein the controller is configured to automatically cause at least one of the pictures stored in the local memory to be sent to a location associated with an email account.
28. (New) The camera system of claim 21 wherein the plurality of recognizable words having different plain meanings and commonly associated with taking a picture are pre-assigned.

29. (New) The camera system of claim 21 wherein the camera is configured to learn words from user input for the voice recognizer to recognize and for the controller to associate with specific commands.

30. (New) The camera system of claim 21 wherein the camera includes an indicator that is activated if the voice recognizer is unable to recognize a command from a sound received at the microphone.

31. (New) The camera system of claim 21 wherein one of the words is "snap."

32. (New) The camera system of claim 21 wherein one of the words is "cheese."

33. (New) The camera system of claim 21 wherein one of the words is "shoot."

34. (New) The camera system of claim 21 wherein one of the words is "click."

35. (New) The camera system of claim 21 wherein the voice recognizer is configured to receive and process a third human sound to be recognized as a third word that is different from the first and second words and is used by the control program to perform a second camera command.

36. (New) The camera system of claim 35 wherein the controller is configured to delay the second camera command for an intentional period of time after the voice recognizer recognizes the third word.

37. (New) The camera system of claim 21 further comprising a zoom lens coupled to the controller, wherein the controller is configured to accept user input from the touch sensitive display screen to determine the amount of zoom to be imparted to the zoom lens.

38. (New) The camera system of claim 21 wherein the controller is configured to receive input regarding focus of the lens from the touch sensitive display.



39. (New) The camera system of claim 21 wherein the controller is configured to cause pictures to be uploaded over the internet for storage at an internet picture hosting website and to be transmitted to another party.

40. (New) The camera system of claim 21 wherein the controller is configured to enable the user to select specific pictures stored in the local memory to be uploaded to the internet picture hosting website.

Amendments to the Claims dated June 21, 2016.

65. On October 12, 2016, the examiner issued an office action rejecting the claims over Imamura (U.S. Patent Publication No. 2005/0168579), Schrock, et al., (U.S. Patent No. 5,923,908), Montulli (U.S. Publication No. 2006/0189349), Rubinstein (U.S. Publication No. 2008/0096587), Hietala, et al. (U.S. Publication No. 2006/0097933), and Shah et al. (U.S. Publication No. 2006/004132). *See* Non-Final Rejection dated Oct. 12, 2016.

66. In response, the applicant amended the claims on April 12, 2017, as follows:

**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application.

1 – 20. (Canceled)

21. (Currently Amended) A camera system comprising:

(a) a camera that is operable to take and store pictures, and that includes: (i) a lens, (ii) an image sensor, (iii) at least one microphone, (iv) a voice recognizer, (v) a controller, (vi) a WIFI interface, and (vii) a touch sensitive display;

(b) the controller including a control program having instructions to control and respond to the voice recognizer;

(c) the voice recognizer coupled to the at least one microphone and the controller, and configured to receive and process sounds into recognized words;

(d) the camera further configured to maintain and store a plurality of recognizable words having different plain meanings and commonly associated with taking a picture, the recognition of any of which will cause the camera to take a picture;

(e) wherein the voice recognizer is operable to receive a first and a second human sound spoken by the same person, and the voice recognizer is operable to recognize using speaker-independent voice-recognition:

(i) the first human sound as a first human spoken word from among the plurality, the recognized first human spoken word being assigned by the control program to be a command for the camera to take a picture, and

(ii) the second human sound as a second human spoken word from among the plurality, the recognized second human spoken word being different from the first human spoken word and also simultaneously assigned by the control program to be the same camera command to take a picture;

(f) the controller configured to:

(i) cause the camera to take a picture in response to the voice recognizer recognizing either the first or second human spoken word and to ~~store~~ save the picture in a local memory in the camera; and

(ii) automatically upload ~~the designated pictures previously selected from among a group of pictures saved~~ stored in the local memory of the camera, ~~the designated pictures uploaded~~ via the WIFI interface and an internet connection from the camera system to a user-selected account associated with an email address ~~location~~ at an internet picture hosting website as instructed by a user of the camera, but the automatic upload occurring only if predetermined conditions are met, the predetermined conditions including at least the controller receiving:

- (1) an indication from the WIFI interface that the system can make an internet connection via the WIFI interface; and
- (2) an indication from the local memory that a user has elected an option to designate at least one picture from the group of pictures saved ~~stored~~ in the local memory to be uploaded to the internet picture hosting website.

22. (Previously Presented) The camera system of claim 21 wherein the system further comprises a cell phone.

23. (Currently Amended) The camera system of claim 22 wherein the controller is configured to determine if the recognized word is for one of either a camera operation or a cell phone operation.

24. (Previously Presented) The camera system of claim 22 wherein the voice recognizer is configured to recognize at least one spoken word to control dialing of the cell phone.

25. (Previously Presented) The camera system of claim 22 wherein the voice recognizer is configured to recognize spoken words in association with text messaging over the cell phone.

26. (Previously Presented) The camera system of claim 21 wherein the controller is further configured to execute an internet browser program and display the internet picture hosting website on the touch sensitive display.

27. (Canceled).

28. (Previously Presented) The camera system of claim 21 wherein the plurality of recognizable words having different plain meanings and commonly associated with taking a picture are pre-assigned.

29. (Previously Presented) The camera system of claim 21 wherein the camera is configured to learn words from user input for the voice recognizer to recognize and for the controller to associate with specific commands.

30. (Previously Presented) The camera system of claim 21 wherein the camera includes an indicator that is activated if the voice recognizer is unable to recognize a command from a sound received at the microphone.

31. (Previously Presented) The camera system of claim 21 wherein one of the words is "snap."

32. (Previously Presented) The camera system of claim 21 wherein one of the words is "cheese."

33. (Previously Presented) The camera system of claim 21 wherein one of the words is "shoot."

34. (Previously Presented) The camera system of claim 21 wherein one of the words is "click."

35. (Previously Presented) The camera system of claim 21 wherein the voice recognizer is configured to receive and process a third human sound to be recognized as a third word that is different from the first and second words and is used by the control program to perform a second camera command.

36. (Previously Presented) The camera system of claim 35 wherein the controller is configured to delay the second camera command for an intentional period of time after the voice recognizer recognizes the third word.

37. (Previously Presented) The camera system of claim 21 further comprising a zoom lens coupled to the controller, wherein the controller is configured to accept user input from the touch sensitive display screen to determine the amount of zoom to be imparted to the zoom lens.

38. (Previously Presented) The camera system of claim 21 wherein the controller is configured to receive input regarding focus of the lens from the touch sensitive display.

39. (Previously Presented) The camera system of claim 21 wherein the controller is configured to cause pictures to be uploaded over the internet for storage at an internet picture hosting website and to be transmitted to another party.

40. (Currently Amended) The camera system of claim 21 wherein the controller is configured to enable the user to select specific pictures ~~stored~~saved in the local memory to be uploaded to the internet picture hosting website.

67. In Remarks submitted with the amendment on April 12, 2017, the applicant argued as follows:

#### **REMARKS**

The Examiner's October 12, 2016 Non-Final Office Action ("NFOA") in this application is received with thanks. Claims 21-26 and 28-40 are currently pending.

In the NFOA, the Examiner objected to the drawings under 37 CFR 1.83(a) as not showing "a WIFI interface," "an internet connection," "an internet hosting website," and "a cell phone." Applicant herewith amends the drawings to show the cell phone, WIFI interface, internet connection, and internet picture hosting website, and Applicant amends the specification to reference those components in the figures. No new matter has been added, as Figure 3 has been amended simply to show cell phone, WIFI interface, internet connection, and internet picture hosting website already present in the original specification.

In addition, Applicant amends Claims 21, 23 and 40 to clarify the invention, and cancels Claim 27, which is redundant in view of the amendments to Claim 21. Applicant traverses the non-final rejections of Claims 21-26 and 28-40, as discussed below.

#### **Summary of the Non-Final Rejections**

The October 12, 2016, Non-Final Office Action includes the following non-final rejections:

- Claims 21, 28-35, and 37-40 stand rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Imamura (U.S. 2005/0168579) in view of Shrock, et al. (U.S. 5,923,908) and Montulli, et al. (U.S. 2006/0189349);
- Claims 22-25 stand rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Imamura in view of Shrock, Montulli, and Rubinstein (U.S. 2008/0096587);
- Claim 26 stands rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Imamura in view of Shrock, Montulli, and Hietala (U.S. 2006/0097993);
- Claim 27 stands rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Imamura in view of Shrock, Montulli, and Shah, et al. (U.S. 2006/0041632);
- Claim 36 stands rejected under pre-AIA 35 U.S.C. § 103(a) as being unpatentable over Imamura in view of Shrock, Montulli, and Rees, et al. (U.S. 2005/0128311).

Applicant disagrees with these rejections under § 103 and respectfully requests allowance of Claims 21-26 and 28-40.

In support of this response, Applicant also files herewith the expert declaration of the inventor, Mr. Jeffrey C. Konicek under 37 CFR § 1.132 (hereinafter “Konicek Decl.”).<sup>1</sup>

**Applicant’s Response to the Non-Final Rejections**

Claim 21 (and its dependencies) are patentable for at least two distinct reasons. Specifically, the combination of references fails to disclose or obviate a camera that:

(1) maintains and stores a plurality of recognizable words having different plain meanings that are simultaneously assigned to the same camera command to take a picture (elements (d) and (e)); or

(2) automatically uploads designated pictures from a group of pictures saved in the local memory of the camera via the WIFI interface and an internet connection from the camera to a user-selected account associated with an email address at an internet picture hosting website, but only if predetermined conditions are met (element (f)(ii)).

Each of these separate distinctions over the art is addressed herein. Applicant also addresses additional distinctions for dependent Claim 26.

**I. Montulli Fails to Obviate Automatic Upload As Claimed**

The Examiner relies solely upon Montulli for the “automatic upload” features of Claim 21 (element (f)). NFOA at 8-9. However, Montulli fails to disclose these features, and none of the references remedy its deficiencies.

***A. Montulli does not Provide an Option for the User to Designate for Automatic Upload at Least One Picture Selected From a Group of Saved Pictures***

Applicant’s inventive camera system allows the user to *designate* which pictures selected from among those saved in the local memory are automatically uploaded to a user-selected account associated with an email address at an internet picture hosting website, while keeping

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<sup>1</sup> Mr. Konicek, the inventor, is an expert in voice recognition techniques and upload systems. He has spent much of his career researching and working with control systems, computer systems, speech recognition systems, and WIFI. Konicek Decl. at ¶¶4-8. His declaration very clearly explains exactly how the systems described in Imamura and Montulli operate. Konicek Decl. at ¶¶19-42.



others (that are not selected for automatic upload) saved in the local memory. For example, claim 21 element (f)(ii) recites (emphases added):

(f) the controller configured to...

(ii) *automatically upload designated pictures previously selected from among a group of pictures saved in the local memory* of the camera, the designated pictures uploaded via the WIFI interface and *an internet connection from the camera system to a user-selected account associated with an email address at an internet picture hosting website* as instructed by a user of the camera, but the automatic upload occurring only if predetermined conditions are met, the predetermined conditions including at least the controller receiving:

(1) an indication from the WIFI interface that the system can make an internet connection via the WIFI interface; and

(2) an indication from the local memory that *a user has elected an option to designate at least one picture from the group of pictures saved in the local memory* to be uploaded to the internet picture hosting website.

Exemplary support for this feature and the user's ability to designate pictures is described, for example, in the specification at [0036]:

Another aspect of the present invention provides for simpler photo offloading from the modern digital camera when a set of predetermined conditions, such as day, time, number of pictures to offload, etc., are met. The camera system preferably includes the ability for the user to indicate to the camera which pictures to offload so that the camera offloads only those pictures that are so indicated by the user.

Applicant's inventive camera system provides a significant improvement over Montulli. The user of Applicant's system can designate certain pictures (at least one) for automatic upload by selecting an option designating, for example, specific pictures or even folders containing pictures, while keeping the other undesignated pictures or folders saved only on the camera's local memory. In this manner, only pictures previously designated by the user are automatically uploaded to the internet picture hosting website when the WIFI connection is made. Not *every* photo saved on the camera memory must be automatically uploaded.

Thus, the user of Applicant's system has flexibility, among other things, to designate only certain photos (e.g., that are properly edited, in focus, of interest to others, or "highest priority") without wasting system resources on other uploads of unselected saved photos. Unlike Montulli, the user of Applicant's claimed system makes an affirmative selection of which photos to upload *without* being forced to delete from the local memory the photos that are not to be uploaded.

In Montulli, however, the camera provides no options for the user to designate a subset of the locally-saved pictures for automatic upload – Montulli describes that *all saved images* are transmitted over the WLAN. Konicek Decl. at ¶31. Paragraph [0017] describes Montulli’s (deficient) user options:

[0017] FIG. 3 shows another embodiment for securely transmitting image data. In this process, the cell phone captures image data using the integrated cell phone camera (100). *To minimize data transmission requirement a user may manipulate a recorded image*, and the associated image data. The manipulations include a “save” option and a “delete” option. This embodiment also includes “transmit” and “mark” options. *Button controls on the cell phone enable the selection of at least the delete and transmit options and optionally the save and mark options.* These options for manipulating image data may be executed one image at a time or, alternatively, button controls may be used to “mark” a plurality of images *for bulk manipulation of images and associated image data.* *Only saved images are transmitted over the WLAN.* A number of images may be taken and stored on the cell phone.

As shown above, Montulli first describes that to “minimize data transmission requirement a user may manipulate a recorded image” by selecting either one of two manipulations: “save” or “delete.” Montulli then states “Only saved images are transmitted over the WLAN.” Thus, to adjust transmission size, the user in Montulli can either select “save” or “delete” for an image, but all the “saved images are transmitted over the WLAN.” Konicek Decl. at ¶¶31.a-d. Neither of these options allows the user to designate for upload only a selected subset of images from the group of saved images. Konicek Decl. at ¶31.e.

As explained by Mr. Konicek in his declaration, in Montulli, to exclude a certain image from being automatically uploaded, the only option available for the user is to “delete” the image from the device instead of saving it, thereby eliminating the image altogether. Konicek Decl. at ¶31.e. Stated differently, the user cannot select from the saved images only a subset of images to automatically uploaded. The user cannot save an image on the device without the saved image being automatically uploaded. The upload scenario in Montulli is “*all or nothing*.”<sup>2</sup>

<sup>2</sup> Konicek Decl. at ¶31.e. Montulli describes that the “mark” option is used to mark “a plurality of images for bulk manipulation of images and associated image data” (for example, to select a *group of images* and then select “delete” or “save” for that group of images). Montulli at [0017], Konicek Decl. at ¶¶32.a-b. Montulli’s system and user are still limited to “delete” or “save”— saved images are transmitted over the WLAN, so the user cannot save a photo without it being transmitted. Konicek Decl. at ¶¶31, 32.c.

While Montulli's disclosure mentions a transmit option, it says absolutely nothing specific about how this option affects images. Konicek Decl. at ¶¶33.b-c. Montulli only says that "[b]utton controls on the cell phone enable the selection of at least the delete and transmit options..." Thus, Montulli does not explicitly state that the "transmit option" causes photos to be transmitted. Konicek Decl. at ¶33.c. However, even if it is assumed that the "transmit option" does cause transmission of photos, Montulli still expressly teaches that *all* saved photos are uploaded, and nothing disclosed about the transmit option alters this express teaching. Konicek Decl. at ¶33.d. According to Montulli's teaching, there is no selection process and all saved photos are transmitted – photos must be deleted to prevent upload. Konicek Decl. at ¶31.

Critically, Montulli ties the automatic upload feature to *whether or not the images are saved*, as discussed above, and not to the "transmit" option. Thus, a person of ordinary skill in the art reading Montulli would read and understand the "transmit" option to be, at best, a manual transmission of all saved pictures and not an automatic, selective upload feature as Applicant claims. Konicek Decl. at ¶33.e.

Paragraph [0011] of Montulli, which describes purported "advantages" of Montulli's system, confirms that Montulli's user options fail to obviate Applicant's claims. Montulli states (emphases added):

[0011] Advantages of the system may include one or more of the following. The system *freed up the memory* in the camera for taking more pictures without having to swap out memory cards as in conventional systems. Another advantage is that it affords the user the ability to wireless *synchronize all associated multimedia assets*, such as digital photos, and/or albums that contain digital data. Thus, if a particular multimedia asset is captured, the information can be automatically uploaded to a server and removed from the device's memory to allow additional pictures to be taken. This synchronization is accomplished efficiently and automatically by, in one embodiment, transparently transferring newly captured images whenever the device detects an available wireless network.

Montulli's stated goal of "synchronization" shows that *all* saved images on the camera are automatically uploaded in order to achieve *synchronization* between images on the camera and images on the computer. Konicek Decl. at ¶35.a. In other words, the goal is for all saved images on the camera to also be reflected on the server. *Id.* For this reason, Montulli's user deletes images that are not to be uploaded (preventing the systems from being "out of sync"). *Id.* Allowing the user to select some from among all saved images to be automatically uploaded (as

claimed by Applicant) could prevent synchronization between device and server because photos may be kept on the camera that are not on the server. Konicek Decl. at ¶35.b.

In short, Applicant's claim enables some photos to stay in the camera memory indefinitely without being automatically uploaded, whereas Montulli's system uploads all saved photos. Claim 21 is allowable and the § 103 rejections must be withdrawn at least because Montulli and the other references do not provide a user option to designate at least one picture from a group of saved pictures to be automatically uploaded.

***B. Montulli Describes Upload to Intermediary Servers and Computers that Connect to Websites – Exactly the Type of Process Applicant Distinguishes***

Claim 21 element (f)(ii) also recites that the controller is configured to “automatically upload designated pictures ... via the WIFI interface and an internet connection *from the camera system* to a user-selected account associated with an email address at an internet picture hosting website.”

Montulli fails to disclose or suggest this feature because, as explained in detail below, Montulli teaches always using an intermediate storage system (i.e., server, home computer, etc.) from which distribution of image information is provided over the internet. That is, first, photos are uploaded to a local computer/server on the WLAN, and second, only after the first upload, the local computer/server connects and uploads the photos to an internet website. Konicek Decl. at ¶37. There is no connection between the camera and the internet picture hosting website during upload in Montulli. Konicek Decl. at ¶41.a. Furthermore, the computer to which the photos are uploaded is not a user-selected account at the picture hosting website as claimed – it is simply a computer on the WLAN. Konicek Decl. at ¶41.b.

As explained in the Konicek Declaration, it logically flows that Montulli uses an intermediary server/computer, because as discussed in I.A above, Montulli does not allow for photo designation prior to automatically uploading. Konicek Decl. at 42. Consistent with Montulli's discussion, the server/home computer referenced in Montulli is effectively photo backup for the cell phone that stores *all pictures* saved on the device. Konicek Decl. at 29-35 and 42.a, Montulli at [0011]. However, a user of Montulli's system, which uploads all saved pictures, would not necessarily want all pictures printed or shared to a website because of cost or other concerns. Konicek Decl. at 42.b. Hence, Montulli teaches uploading all images to the intermediary server/computer, and from there, the user can access that server presumably to

select which specific pictures to send via the internet to a “photofinisher” (Montulli at [0021]) or elsewhere for “printing” or “sharing” (Montulli at [0010]). Konicek Decl. at 42.c.

Consistent with the above, Montulli describes uploading to a remote computer (which will act as the internet distribution point) such as a desktop computer or “image server.” See Montulli at [0009], [0016], [0018], [0024]; Konicek Decl. at ¶38. Montulli *expressly describes* that these computers/servers are *not* “photofinishers,” and Montulli also does not describe these systems as picture-hosting websites – the computers/servers are used as an intermediary to transfer the image data to the photofinisher existing on the internet. Konicek Decl. at ¶¶38-39. Paragraph [0021] of Montulli states:

*The cell phone can communicate over the WLAN to a server* that is connected to the Internet. As would be evident to one of ordinary skill in the art, the server includes a CPU, hard disk, memory, and Internet access such as a modem, network interface card, or a cable modem. *Having access to the Internet, the server can transfer image data from the cell phone to a photofinisher. When within range of the WLAN, the system transfer data automatically to the storage space of the remote home-based server from the data storage device of the user's cell phone.* The cell phone's WLAN transceiver then transmits the pictures over the WLAN. Alternatively, when WLAN is not present and the cell phone data storage device is almost full, the cell phone can transmit images through the cellular network (preferably using 3G) to *the home-based server for storage thereon.* In that case, the cell phone calls the server's modem and transmits data to the server over the POTS network.

(emphases added). As shown above in Montulli: Step 1 - The cell phone “communicates over the WLAN *to the server.*” Step 2 – “Having access to the Internet, *the server can transfer image data from the cell phone to a photofinisher.*” Konicek Decl. at ¶39. It is absolutely clear here that Montulli's cell phone communicates over the WLAN (or even a cellular connect) to the home-based server. Konicek Decl. at ¶39.a. The *home-based server* is the device responsible for transferring image data over the internet to the photo finisher, not the cell phone/camera. Konicek Decl. at ¶39.b.

Thus, Montulli describes the *exact* type of process that Applicant (and the pending claims) *distinguishes* – photos in Montulli must first be uploaded on the “home-based server,” (or other server that has internet access), and that server in turn is used to connect to the internet and upload to a photofinisher. Konicek Decl. at ¶41. Applicant's specification at [0037]

expressly states that a goal of his invention was to avoid the use of intermediate storage on a computer before sending photos to internet destinations:

So equipped, the inventive camera system can now independently upload its pictures to *any of the internet-based photo printing services, such as those provided by Walmart.com, Walgreens.com, Kodak.com, etc., without the need for first storing the photos to a computer system and then connecting the computer system to the internet to upload the pictures.*... Providing the novel combination of a high photo-quality camera system with direct access to the internet according to this aspect of the present invention will further improve the utility of the camera system and these services.

(emphasis added). Montulli does not disclose automatically uploading *from the camera* to the photofinisher or to an internet picture hosting website as claimed and described by the specification.

The other processes describe by Montulli have this same issue – each is a two-step process of first uploading to a computer/server, and then managing the pictures on that computer/server to send them to a website. For example, Montulli at [0010] describes upload that can occur at a “Wireless hotspot” (i.e., a place with WIFI other than the user’s home):

The system enables the automatic transfer of multimedia data from a camera or cell phone when in proximity of a Wireless hotspot. The system automatically senses when the multimedia device is *in range of an appropriate Wireless hotspot and begin a transfer of the data to an appropriate server over the network*. This mechanism allows the user to take pictures or other multimedia and not have to go through an explicit export step. The data would be made available *from the new server location* for printing, sharing and archiving, and any other use.

(emphases added). Montulli describes that the “new server location” (which is *not* a website) at the Wireless hotspot stores the photos, and that the user can access the data *from that new server location* to print archive, share, etc. Konicek Decl. at ¶40.b. Like the “home-based server,” the user must separately access the server in order for the photos to be transferred over the internet to a website. Konicek Decl. at ¶40.c. This is not a connection from the camera to the website, and the generic server is not a user-selected account at a picture hosting website. Konicek Decl. at ¶40.d.

Unlike Applicant’s claim, which provides for upload from the camera to an account associated with an email address at virtually any internet picture hosting website, the user in

Montulli needs to separately access a particular individual server that then provides internet access for the upload of the image(s) to a photofinisher or picture-hosting website. Konicek Decl. at ¶41.a.

Applicant's Specification at Paragraph [0037], quoted above, explicitly distinguishes Montulli, by describing that photos can be uploaded *via an internet connect from the camera system* to internet picture hosting sites/web-based photo printing sites without the need for first storing the photos on a separate computer system. Furthermore, Paragraph [0038] of Applicant's specification makes clear that this process can be automatic. Applicant's Claim 21 is directed to this feature described in the specification – the automatic upload is from the camera to a user-selected account associated with an email address at an internet picture hosting website via an internet connection between the camera and the website.

In sum, Montulli's extra step of uploading to generic servers/computers and managing photos from those servers is the exact type of process distinguished by Applicant's claim. Applicant respectfully requests allowance of Claim 21 (and its dependencies) based on this additional deficiency in Montulli that is not remedied by the references of record.

## II. Imamura Does Not Disclose or Obviate Maintaining and Storing A Plurality of Words Simultaneously Assigned to the Same Picture-Taking Command

The Examiner relies upon Imamura in the NFOA for Claim 21 elements (d) and (e). However, Imamura, alone or in combination with the other cited references, fails to disclose, suggest, or obviate these claim elements. Claim 21 as amended recites:

(d) the camera further configured *to maintain and store a plurality of recognizable words having different plain meanings* and commonly associated with taking a picture, *the recognition of any of which will cause the camera to take a picture*;

(e) wherein the voice recognizer is operable to receive a first and a second human sound spoken by the same person, and the voice recognizer is operable to recognize *using speaker-independent voice recognition*:

(i) the first human sound as a first human spoken word from among the plurality, the recognized first human spoken word being assigned by the control program to be a command for the camera to take a picture, and

(ii) the second human sound as a second human spoken word from among the plurality, the recognized second human spoken word being different from the



first human spoken word and *also simultaneously assigned by the control program to be the same camera command to take a picture.*

Applicant has amended these claim elements to clarify that multiple words are *simultaneously* assigned to the same camera command to take a picture, and that voice recognition is “speaker-independent.”

Applicant’s invention described by elements (d) and (e) allows *any* user (i.e., “speaker-independent”) to speak naturally to the camera, using a variety of different known words associated with taking a picture to command the camera to take a picture. *See, e.g.*, Specification at [0002]. Applicant’s invention can readily recognize a given user speaking any of a plurality of words, for example, any of “shoot”, “snap”, “cheese”, “click” (Specification at [0017]), to take a picture. Thus, with Applicant’s invention, there is no need for a user to memorize which single word is programmed to perform a given camera operation. Rather, the system simultaneously has available several familiar (but different) words for that user to perform a given camera operation.

As explained in the Konicek Declaration, Imamura does not disclose storing a plurality of distinct words that are *simultaneously* assigned to the same specific picture-taking command, nor does it allow a user to speak naturally with different words to trigger an operation. Konicek Decl. at ¶¶20-26. A user of the Imamura system does not have available a plurality of different words to use as a voice command for the single camera function. The user of the Imamura system must memorize the correct single word assigned to each camera operation. Konicek Decl. at ¶20. Most critically for the operation of the shutter, unless the user of the Imamura system remembers and speaks the single assigned word, the shutter will not operate and the “magic” moment of an image will be lost.

Imamura is at best *cumulative* to art already of record and already distinguished during prosecution of related cases. In Imamura, each operation is triggered by a single word assigned to a single command. Thus, like Kim (Pub. No. 2005/0195309), Imamura lists different *options* for the single word that can be recognized to trigger a picture-taking operation (i.e., “cheese,” or “shutter”). The user of the Imamura system must select one – and only one – of those options to control the shutter operation. Konicek Decl. at ¶23. The Examiner previously agreed (repeatedly and correctly) that Kim’s similar description of selecting either “photograph” or “cheese” as

the single stored command word for a function does not disclose or suggest the advantages of Applicant's claimed inventions.<sup>3</sup>

Here, the Examiner relies solely upon Paragraph [0064] of Imamura in the NFOA for elements (d) and (e) of Applicant's claim. However, as clearly explained by Mr. Konicek, Paragraph [0064] of Imamura in fact describes that a single word or phrase is recognized to trigger each operation, and also provides *examples* of what the single command corresponding to a shutter operation may be. Konicek Decl. at ¶22-25. In fact, Paragraph [0064] recognizes that extraneous words and noise cause system malfunction, and therefore emphasizes the importance of assigning a single, specific word to each operation (to avoid such malfunction). Konicek Decl. at ¶22.c-d. Paragraph [0064] in its entirety is reproduced below:

"A given voice is preset. When the voice obtained at the microphone 13 is analyzed to be a specific word, the shutter is put into operation. That is, as the specific word is recognized, the imaging system puts the shutter into operation. For instance, such a given voice or command may be "Cheese!", "Shutter!" or the like. With the specific word preset, the shutter is unlikely to respond to ordinary conversations, surrounding noises or the like, which may otherwise lead to malfunction. Further, if specific operations are allocated to a plurality of words, it is then possible not only to put the shutter into operation but also to use voices to *switch the camera 10 from one zoom state or taking mode over to another*, and *switch a flash*, from ON over to OFF and vice versa, or the like. Furthermore, if such a specific word as mentioned above has also a certain sound-level threshold value so that various operations can be performed only when it is exceeded, malfunction can then be more effectively prevented."

(emphases added).

Every sentence of Paragraph [0064] confirms without a doubt that in Imamura, each operation is controlled by a single, specific command. Therefore, it does not disclose Claim 21 element (d). For completeness, Applicant addresses the entire paragraph herein.

The first sentence of Imamura [0064] simply states that a voice is "preset" (i.e., existing in the system prior to the described voice detection operations). This has no bearing on the number of words simultaneously assigned to a specific operation. Konicek Decl. at ¶26.

<sup>3</sup> See, e.g., Response to NFOA, Application No. 14/199,855 at 8-11 (May 21, 2014); Notice of Allowance, Application No. 14/199,855 at 2 (July 14, 2014); Response to NFOA, Application No. 14/203,129 at 15-17 (June 3, 2014); Notice of Allowance, Application No. 14/203,129 at 2 (July 14, 2014).

The second and third sentences of [0064] describe that a *singular*, specific word is recognized to put the shutter into operation. Imamura states (emphases added): “When the voice obtained at the microphone 13 is analyzed to be a specific word, the shutter is put into operation. That is, as the specific word is recognized, the imaging system puts the shutter into operation.” Thus, Imamura uses the *singular* pronouns “a”/“the” to describe what puts the shutter into operation – meaning that in Imamura’s system, only one word is recognized for the shutter operation, as was well-known in the art of the time.<sup>4</sup> See Konicek Decl. at ¶22.

The fourth sentence of [0064] is nearly identical to language in Kim, and the Examiner already agreed that such language *fails* to disclose or obviate Applicant’s claims because it was merely a list of suggested commands.<sup>5</sup> That is the case again here. Imamura states: “**For instance**, such **a** given voice or command may be “Cheese!”, “Shutter!” **or** the like.”” Here, as in Kim, this sentence is merely providing *suggestions* of the single word that can be spoken by a user and recognized by the system. See Konicek Decl. at ¶23. The sentence is not suggesting that each of these words corresponds to the same camera command to take a picture.

Thus, like Kim’s “examples”,<sup>6</sup> Imamura begins by indicating, with the phrase “for instance,” that these are *examples* of the singular, given voice or command corresponding to an operation (as discussed in the preceding sentences). See Konicek Decl. at ¶¶23.a-c. Consistent with the preceding sentences, Imamura uses the singular pronoun “a” to describe the voice or command (and not plural “commands”). See Konicek Decl. at ¶23.c.

In addition, like Kim, the list of possible commands includes the transitional phrase “or” to indicate that the single, preset word may be one of several mutually exclusive options –

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<sup>4</sup> This is further confirmed by Paragraph [0073] of Imamura, which also describes simply “a” singular, specific verbal frequency pattern to trigger shutter operations:

The extracted attribute pattern is compared with a standard pattern 23. As both patterns match (pattern matching) (block 24), the attribute pattern is recognized as a specific word. Now with the sound detection mode set, trigger signals are sent from CPU 16 to a shutter driving block 18 and an image pickup device 19 with the result that a mechanical shutter and an electronic shutter are operated to pick up images.

<sup>5</sup> See, e.g., Response to NFOA, Application No. 14/199,855 at 8-11 (May 21, 2014); Notice of Allowance, Application No. 14/199,855 at 2 (July 14, 2014); Response to NFOA, Application No. 14/203,129 at 15-17 (June 3, 2014); Notice of Allowance, Application No. 14/203,129 at 2 (July 14, 2014).

<sup>6</sup> Kim at [0090] states (emphases added): “**Examples** of the photographing commands include “photograph” **or** “cheese.””

“Cheese!”, “Shutter!” *or* the like, as opposed to Cheese, Shutter, *and* the like. *See* Konicek Decl. at ¶23.d. In Applicant’s claim, multiple words must be *simultaneously* assigned to the same command. Imamura’s selection of one of several options does not show each of a plurality of distinct words “simultaneously” assigned for picture-taking command. Konicek Decl. at ¶23.e.

Accordingly, Imamura’s system is configured to respond only to a single command to take a picture. Such a limited system exhibits the same disadvantages as Kim, and the same limitations in use expressly discussed by Applicant’s specification. *See* Specification at [0002], [0017]. Applicant’s advantages and improvements over such “single word-single command” systems are clearly set forth in Claim 21, and are not anticipated or rendered obvious by Imamura. The Examiner has already agreed to this well-established concept throughout the prosecution history of this patent family.

In the subsequent (fifth) sentence of Imamura [0064], Imamura recognizes that malfunctions occur from unintentionally recognizing noises or other words spoken in ordinary conversation: “With the specific word preset, the shutter is unlikely to respond to ordinary conversations, surrounding noises or the like, which may otherwise lead to malfunction.” For this reason, Imamura emphasizes here that “the [singular] specific word” is preset, to avoid such “malfunction.” Konicek Decl. at ¶¶22.c-d.

The sixth sentence of [0064] discusses, for the first time, a “plurality of words.” However, as explained by Mr. Konicek (Konicek Decl. at ¶24), Imamura’s reference to a “plurality” is referring to a corresponding plurality of *different* operations: “Further, if specific *operations* are allocated to a plurality of words, it is then possible not only to put the shutter into operation but also to use voices to *switch the camera 10 from one zoom state or taking mode over to another*, and *switch a flash*, from ON over to OFF and vice versa, or the like” (emphases added). Imamura is specific that a plurality of different words *means* a plurality of different operations. Konicek Decl. at ¶¶24.a-b The plurality of different words in Imamura only makes it “possible” to control more (and different) operations by voice, such as adjusting zoom, adjusting flash, powering on, etc. *Id.* Nothing here indicates that two or more distinct words from the plurality are *simultaneously* assigned to trigger the *same* picture-taking operation.

Therefore, where Imamura discusses a “plurality of words,” he is simply discussing assigning each to a unique camera operation.<sup>7</sup>

Paragraph [0075] of Imamura confirms the above in describing the process by which a plurality of different verbal patterns are registered and assigned to a plurality of *different* operations. When a plurality of verbal patterns is registered, each pattern corresponds to its own different operation:

“It is here noted that a plurality of verbal patterns may be registered as the standard pattern 23, and *different operations* are assigned to *those verbal patterns*. This ensures that the shutters are not only operated but also switchover of the camera 10 from one zoom state and taking mode to another, turning a flash on or off, etc. is performed by way of voices.”

(emphases added). *See also* Konicek Decl. at ¶¶24.a,c. Contrary to the statement in the Examiner’s remarks, there is nothing “indefinite” as to the meaning here – it is absolutely clear that in Imamura, additional verbal patterns (also described as “words”) correspond to additional operations.

In sum, Imamura is cumulative to Kim, and fails to obviate Claim 21 for the same reasons Kim failed. Imamura describes that each operation is controlled by a single, specific command, and merely lists several options for what that command can be to control the shutter. Imamura’s discussion of a “plurality” of words unambiguously teaches that each of the plurality of specific words corresponds to a different operation.

A fair reading of Imamura shows that it is just another system in which each operation is controlled by one command word, like Kim. Therefore, it does not obviate the claims – the only way to reach Applicant’s solution from Imamura is through hindsight with the benefit of Applicant’s claims. Use of such hindsight is contrary to law. *See, e.g.*, MPEP 2142 (impermissible hindsight must be avoided and the legal conclusion [of obviousness] must be reached on the basis of the facts gleaned from the prior art); *see also, e.g., Insite Vision Inc. v. Sandoz, Inc.*, 783 F.3d 853, 859 (Fed. Cir. 2015) (“Defining the problem in terms of its solution reveals improper hindsight in the selection of the prior art relevant to obviousness”).

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<sup>7</sup> The last sentence of paragraph [0064] simply says that the camera can ignore voice commands that are below a certain threshold volume level, which is not element (d) of Claim 21.

For at least these reasons, Applicant respectfully requests that the Examiner withdraw his rejection of Claim 21 and claims 22-26 and 28-40, which depend from it.

### III. The Examiner's Alternative Reference to Chen Does Not Establish Obviousness

The Examiner generally refers to Chen (U.S. 2003/0101052) "in the alternative" at the end of his interview summary without actually relying upon Chen in a rejection, stating:

"Alternatively, in the event applicant's interpretation of Imamura is found to be persuasive, it would be obvious to modify Imamura in view of Chen, et al. (US 2003/0101052). Chen clearly states that a voice recognition system that *more than one voice command* (i.e., *distinct English words*) can be assigned to the same function (See paragraph 0042 of Chen)."

See NFOA at 4.

As an initial point, the Examiner has not set forth a *prima facie* obviousness rejection based on Chen, and therefore no rejection is actually pending for Applicant to rebut. According to M.P.E.P. §2142, "[t]he examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness." Furthermore, "[t]he Supreme Court in *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 538, 418 (2007) noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit." *Id.* "[R]ejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *Id.*, citing *In re Kahn*, 441 F.3d 977, 988, (Fed. Cir. 2006); see also *KSR*, 550 U.S. at 418 (quoting Federal Circuit statement with approval).

For the Examiner to rely upon Chen, he must actually provide some articulated reason why this reference (which has nothing to do with cameras) should even be combined with the others, and in addition, he must explain why the asserted combination purportedly obviates the claims under § 103. The Examiner has not explained how Chen can be combined with Imamura, or further, what specific feature of the claims the purported combination allegedly obviates. As a result, Applicant is not in a position to respond to the Examiner's "alternative" statement.

### IV. Dependent Claims 26 is Allowable for Additional Reasons

In rejecting Claim 26, the Examiner cites Heitala at [0031] for the notion that executing an internet browser on a camera and/or cellphone was known at the time of the invention.

However, the claim recites more than simply executing a browser. The claim recites “wherein the controller is further configured to execute an internet browser program and *display the internet picture hosting website* on the touch sensitive display.”

Therefore, the internet picture hosting website *to which the pictures were automatically uploaded* (as recited by independent Claim 21) is the website that must be displayed on the camera, according to the claim. In short, Claim 26 further distinguishes the art by making clear that the upload of pictures is to a website accessible on the camera, as opposed to some generic server (as in Montulli). The ability to both automatically upload *from the camera* to such a site and display it from the camera has not been shown in Imamura, Schrock, Montulli, or Hietala. Accordingly, the rejection of Claim 26 must be withdrawn for this additional reason.

### **Conclusion**

In view of the above, Applicant believes that claims 21-26 and 28-40 are in condition for allowance. If the Examiner has any questions or believes an interview would expedite prosecution of this case, please contact the undersigned.

Respectfully Submitted,

/Justin J. Lesko/

Justin J. Lesko  
Reg. No. 69,643

Dated: April 12, 2017

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*Attorney for Applicant*

Response to Non-Final Rejection dated April 12, 2017 at 8–23.

68. Also on April 12, 2017, the applicant also submitted the Declaration under Rule 37 CFR §1.132 of Jeffrey C. Konicek:



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Title	: PICTURES USING VOICE COMMANDS AND AUTOMATIC UPLOAD		
Serial. No.	: 15/188,736	Confirmation No.	: 1033
Applicant	: Jeffrey C. Konicek	TC/A.U.	: 2852
Filed	: June 21, 2016	Examiner	: Rodney E. Fuller
Docket No.	: Torpere-F04-513		
Customer No.	: 107554		

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Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria VA 22313-1450

**DECLARATION UNDER RULE 37 CFR § 1.132 OF JEFFREY C. KONICEK**

I, Jeffrey C. Konicek, declare as follows:

- 1) I understand that I am submitting a declaration in connection with the above captioned application pending in the United States Patent and Trademark Office.
- 2) I am the inventor of the above-captioned application (the “‘736 Application”) and I am the owner of Cutting Edge Vision, LLC, the company to which the ‘736 Application is assigned.
- 3) The ‘736 Application claims priority to Application No. 11/163,391 (now U.S. Patent No. 7,697,827), which was filed on October 17, 2005.

**BACKGROUND AND QUALIFICATIONS**

- 4) I received a Bachelor of Science in Electrical Engineering degree from the University of Illinois at Urbana-Champaign in 1981 and received a Master of Science in Electrical Engineering from the University of Illinois at Urbana-Champaign in 1983.
- 5) In my undergraduate and graduate course work in Electrical Engineering, I studied circuits and systems, linear systems, digital systems, semiconductor processing, control

theory, electromagnetic field theory, and digital signal processing. I was inducted into several engineering honor societies including Tau Beta Pi, and Eta Kappa Nu.

- a. During my senior year in undergraduate study, I became interested in voice recognition systems and theory and was a member of a team of two undergraduates that designed and built a voice-controlled wheel chair. The voice recognition system was of our design and was of the so-called "speaker dependent" type. The system created templates for spoken words, storing the templates in the teaching mode, and matching to the stored templates in the voice recognition mode. First, the user taught the system his unique way of saying a number of predetermined command words (which words would be used to control the wheelchair drive). The template was created by filtering the captured speech into predetermined energy bands (i.e., frequency spectra) and storing numerical representations of the energy as templates of his speech. In voice recognition mode, the system would again capture utterances, apply the same technique to create a template of the speech and then performing a "best match" algorithm to the learned, stored templates to determine the most likely word spoken. The system would then perform the action corresponding to the best match. This system allowed for one control word to uniquely correspond to one action.
  - b. My Master's thesis included the design and construction of a multiprocessor controlled robotic arm.
- 6) I have worked for more than 35 years as an Electrical Engineer.
- a. After graduating from college, I worked for 5 years at AT&T Bell Laboratories as a Member of Technical Staff. There, I worked with high speed video and audio switch technology, voice response systems, and a prototype voice recognition system for operator replacement. The prototype voice recognition system on which I worked was of the so-called "speaker independent" type. In this type of system, no teaching of the system is necessary. The system used Fourier Analysis (i.e., Fourier Transform) to analyze the speech into spectral components and used Linear Predictive Coding (LPC) in the voice recognition algorithm to determine

what the utterance likely was. The system was designed to recognize the digits 0-9 and to work with all accents that were common in the US at the time.

- b. I left AT&T Bell Laboratories to begin work on a new supercomputer system at the University of Illinois in Urbana Champaign, starting as a Computer Research Engineer. I was eventually named the Assistant Director, Hardware Systems, and left this project after 7 years.
- c. Shortly after leaving the university supercomputing project and as part of further graduate study, I taught control systems at the Undergraduate level for 2 years. This class included both classical and modern control theory, and both analog and digital aspects of control theory.
- d. For more than 20 years since I left the University of Illinois in Urbana Champaign, I have been in private practice as an Electrical Engineering consultant for industry and universities in both advisory and practical roles. I have advised and/or designed many projects including computer systems, voice recognition systems, power systems, and rocket propulsion systems.
  - i. One speech recognition system was very similar to the system designed during my senior year as an undergraduate. It was a speaker-dependent system that used DSP to determine the energy spectrum of the spoken word and template matching to perform the recognition. In this system, the template consisted of a number of coefficient values from a Fourier Transformed signal that had been normalized. Recognition again performed template creation methodology to create template values that were then compared to existing templates stored during the teaching phase. The algorithm was, again, best match, but with thresholds so that there was some reasonable assurance that the “recognized” word was in fact a good enough match. This system was used to perform rudimentary control of an early graphics-based PC (X-windows cursor control).

- ii. In a second speech recognition system, I was a member of an advisory team working on a speaker independent voice recognition system for automobile control. I provided overall architecture guidance and provided systems requirements and specifications.
  - iii. During my consulting work, I also worked on several projects that involved uploading files from a computer via WIFI to the internet. For example, I recall at least one project involved uploading source code files from a computer.
- 7) Throughout my career, I have also been named as an inventor on more than thirty patents and patent applications, including many that relate to camera and/or voice recognition systems and methods. Specifically, I have been named as an inventor or co-inventor on at least the following patents and applications:
- 1. U.S. Patent No. 7,697,827, entitled "USER-FRIENDLIER INTERFACES FOR A CAMERA," issued April 13, 2010;
  - 2. U.S. Patent No. 7,933,508, entitled "USER-FRIENDLIER INTERFACES FOR A CAMERA," issued April 26, 2011;
  - 3. U.S. Patent No. 8,467,672, entitled "VOICE RECOGNITION AND GAZE-TRACKING FOR A CAMERA," issued June 18, 2013;
  - 4. U.S. Patent No. 8,831,418, entitled "AUTOMATIC UPLOAD OF PICTURES FROM A CAMERA," issued September 9, 2014;
  - 5. U.S. Patent No. 8,824,879, entitled "TWO WORDS AS THE SAME VOICE COMMAND FOR A CAMERA," issued September 2, 2014;
  - 6. U.S. Patent No. 8,818,182, entitled "PICTURES USING VOICE COMMANDS AND AUTOMATIC UPLOAD," issued August 26, 2014;
  - 7. U.S. Patent No. 8,897,634, entitled "PICTURES USING VOICE COMMANDS AND AUTOMATIC UPLOAD," issued November 25, 2014;

8. U.S. Patent No. 8,923,692, entitled "PICTURES USING VOICE COMMANDS AND AUTOMATIC UPLOAD," issued December 30, 2014;
9. U.S. Patent No. 8,917,982, entitled "PICTURES USING VOICE COMMANDS AND AUTOMATIC UPLOAD," issued December 23, 2014;
10. U.S. Patent No. 9,485,403, entitled "WINK DETECTING CAMERA," issued November 1, 2016;
11. U.S. Application No. 14/614,515, entitled "PICTURES USING VOICE COMMANDS AND AUTOMATIC UPLOAD," filed February 5, 2015;
12. U.S. Application No. 14/950,338, entitled "PICTURES USING VOICE COMMANDS," filed November 24, 2015;
13. U.S. Application No. 14/950,370, entitled "AUTOMATIC UPLOAD OF PICTURES FROM A CAMERA," filed November 24, 2015;
14. U.S. Application No. 15/188,736, entitled "PICTURES USING VOICE COMMANDS AND AUTOMATIC UPLOAD," filed June 21, 2016;
15. U.S. Patent No. 8,295,851, entitled "REALTIME, INTERACTIVE AND GEOGRAPHICALLY DEFINED COMPUTERIZED PERSONAL MATCHING SYSTEMS AND METHODS," issued October 23, 2012;
16. U.S. Patent No. 9,178,991, entitled "REALTIME, INTERACTIVE AND GEOGRAPHICALLY DEFINED COMPUTERIZED PERSONAL IDENTIFICATION AND PAYMENT MATCHING SYSTEMS AND METHODS," issued November 3, 2015;
17. U.S. Application No. 15/169,862, entitled "REALTIME, INTERACTIVE AND GEOGRAPHICALLY DEFINED COMPUTERIZED PERSONAL IDENTIFICATION AND PAYMENT MATCHING SYSTEMS," filed September 22, 2016;
18. U.S. Patent No. 8,880,047, entitled "REALTIME, LOCATION-BASED CELL PHONE ENHANCEMENTS, USES, AND APPLICATIONS," issued November 4, 2014;

19. U.S. Application No. 14/494,386, entitled "REALTIME, LOCATION-BASED CELL PHONE ENHANCEMENTS, USES, AND APPLICATIONS," filed September 23, 2014;
20. U.S. Application No. 15/225,743, entitled "REALTIME, LOCATION-BASED HOME AUTOMATION SYSTEMS AND METHODS," filed August 1, 2016;
21. U.S. Patent No. 8,144,115, entitled "FLAT PANEL DISPLAY SCREEN OPERABLE FOR TOUCH POSITION DETERMINATION SYSTEM AND METHODS," issued March 27, 2012;
22. U.S. Patent No. 8,519,978, entitled "FLAT PANEL DISPLAY SCREEN OPERABLE FOR TOUCH POSITION DETERMINATION SYSTEM AND METHODS," issued August 27, 2013;
23. U.S. Patent No. 9,207,797, entitled "FLAT PANEL DISPLAY SCREEN OPERABLE FOR TOUCH POSITION PREDICTION METHODS," issued December 8, 2015;
24. U.S. Application No. 15/434,020, entitled "DISPLAY SCREEN," filed February 15, 2017;
25. U.S. Patent No. 7,859,526, entitled "ACTIVE MATRIX EMISSIVE DISPLAY AND OPTICAL SCANNER SYSTEM, METHODS AND APPLICATIONS," issued December 28, 2010;
26. U.S. Patent No. 8,248,396, entitled "ACTIVE MATRIX EMISSIVE DISPLAY AND OPTICAL SCANNER SYSTEM," issued August 21, 2012;
27. U.S. Patent No. 8,725,729, entitled "SYSTEM, METHODS AND APPLICATIONS FOR EMBEDDED INTERNET SEARCHING AND RESULT DISPLAY," issued May 13, 2014;
28. U.S. Patent No. 8,631,009, entitled "SYSTEMS AND METHODS FOR EMBEDDED INTERNET SEARCHING, AND RESULT DISPLAY," issued January 14, 2014;

29. U.S. Patent No. 8,996,522, entitled "SYSTEM, METHODS AND APPLICATIONS FOR EMBEDDED INTERNET SEARCHING AND RESULT DISPLAY," issued March 31, 2015;
  30. U.S. Patent No. 9,582,580, entitled "SYSTEM, METHODS AND APPLICATIONS FOR EMBEDDED INTERNET SEARCHING AND RESULT DISPLAY," issued February 28, 2017;
  31. U.S. Application No. 15/409,811, entitled "SYSTEM, METHODS AND APPLICATIONS FOR EMBEDDED INTERNET SEARCHING AND RESULT DISPLAY," filed January 19, 2017;
  32. U.S. Patent No. 8,442,562, entitled "END TO END ACKNOWLEDGMENT OF SMS MESSAGES," issued May 14, 2013.
- 8) Any opinions expressed herein are based on my knowledge and experience in the field.

#### **SUMMARY OF THE PENDING CLAIMS**

- 9) I have read and understand Claims 21-26 and 28-40 set forth in the Response to Non-Final Office Action filed concurrently herewith in the '736 Application.
- 10) Specifically, I have reviewed pending Claim 21, which recites, as claim elements (d), (e):
- (d) the camera further configured to maintain and store a plurality of recognizable words having different plain meanings and commonly associated with taking a picture, the recognition of any of which will cause the camera to take a picture;
  - (e) wherein the voice recognizer is operable to receive a first and a second human sound spoken by the same person, and the voice recognizer is operable to recognize using speaker-independent voice-recognition:
    - (i) the first human sound as a first human spoken word from among the plurality, the recognized first human spoken word being assigned by the control program to be a command for the camera to take a picture, and
    - (ii) the second human sound as a second human spoken word from among the plurality, the recognized second human spoken word being different from the first human spoken word and also simultaneously assigned by the control program to be the same camera command to take a picture;
- 11) To my knowledge at the time of my invention, camera voice recognition systems were "one to one" systems for picture-taking operations – for a user of the camera, each



picture-taking operation for the system corresponded to a single spoken command word or phrase that the user could speak to command the system.

- 12) Thus, I recall that at the time of the invention a need existed in the art for a camera system that could store and recognize, when spoken by a given user, multiple words that correspond to the same picture-taking operation.
- 13) I identified this need in the specification of the '736 Application at [0002]:  

"Still another problem with prior art . . . is that they associate one vocalization or utterance to one camera operation. Thus, the user must remember which command word is to be spoken for which camera operation. This is overly constraining, unnatural, and significantly reduces the utility of adding voice recognition to the camera."
- 14) Paragraph [0017] of the '736 Application specification describes examples of different English words (i.e., any of "shoot," "snap," and "cheese") corresponding to the same camera operation to take a picture:  

"Another aspect of the present invention provides that the voice recognition camera system be capable of associating more than one vocal utterance or sound with a single command. The different utterances are contemplated to be *different words*, sounds or the same word under demonstrably different conditions. As an example, the voice recognition camera system of this aspect of the present invention allows the inventive camera system to understand, for example, any of "shoot", "snap", "cheese", and a whistle to indicate to the camera system that a picture is to be taken."
- 15) Elements (d) and (e) of Claim 21 of the '736 Application are similar to the invention described in Paragraph [0017] of the '736 Application specification.
- 16) Pending Claim 21 also recites as element (f)(ii):

(f) the controller configured to...

(ii) automatically upload designated pictures previously selected from among a group of pictures saved in the local memory of the camera, the designated pictures uploaded via the WIFI interface and an internet connection from the camera system to a user-selected account associated with an email address at an internet picture hosting website as instructed by a user of the camera, but the automatic upload occurring only if predetermined conditions are met, the predetermined conditions including at least the controller receiving:

(1) an indication from the WIFI interface that the system can make an internet connection via the WIFI interface; and

(2) an indication from the local memory that a user has elected an option to designate at least one picture from the group of pictures saved in the local memory to be uploaded to the internet picture hosting website.

- 17) I recall that at the time of the invention, one problem with cameras was that they had to be connected to computers first in order for photos to be uploaded over the internet. Accordingly, one of the issues I addressed in my specification, and in pending Claim 21, is that automatic upload of photos should be *from the camera system* to websites, “without the need for first storing the photos to a computer system and then connecting the computer system to the internet to upload the picture,” as recited by Paragraph [0037] of the ‘736 Application specification:

“So equipped, the inventive camera system can now independently upload its pictures to any of the internet-based photo printing services, such as those provided by Walmart.com, Walgreens.com, Kodak.com, etc., without the need for first storing the photos to a computer system and then connecting the computer system to the internet to upload the pictures.... Providing the novel combination of a high photo-quality camera system with direct access to the internet according to this aspect of the present invention will further improve the utility of the camera system and these services.”

#### **DISTINCTIONS OVER IMAMURA**

- 18) I have read and I understand the Non-Final Office Action in the ‘736 Application dated October 12, 2016 (hereinafter “NFOA”) and the references relied upon in the NFOA, including: (1) U.S. Pub. 2005/0168579 to Imamura; (2) U.S. Pub. 2006/0189349 to Montulli, et al.; (3) U.S. Pub. 2006/0097993 to Hietala; (4) U.S. Pub. 2005/0128311 to Rees, et al.; (5) U.S. Pub. 2008/0096587 to Rubinstein; (6) U.S. Patent 5,923,908 to Shrock, et al.; and (7) U.S. Pub. 2006/0041632 to Shah, et al.
- 19) In the NFOA, the Examiner relies upon Imamura as the primary reference in his rejections, and characterizes Imamura in his interview summary. NFOA at 6-10.
- 20) Respectfully, the Examiner’s reliance upon Imamura and his characterizations of Imamura are incorrect. Based on the facts explained below, Imamura, like the other camera voice recognition systems I am aware of prior to October 17, 2005, is a “one to one” system – each picture-taking operation for the system corresponded to a single command word or phrase available to a user. For this reason, Imamura *does not disclose* storing a plurality of dictionary-distinct words that are simultaneously assigned by the

control program to be the same camera command to take a picture, and recognizing any of those words when spoken by a given user, as described by Claim 21 elements (d) and (e). A user of Imamura's system must remember which command word is to be spoken for which camera operation, which was one of the specific problems in the art at the time identified in [0002] of my '736 Application.

21) My conclusion is based upon at least *three critical findings* from Imamura's specification: (1) Imamura explicitly describes that a single, specific verbal pattern (also referred to as a "word" by Imamura) puts the shutter into operation; (2) Imamura lists options for the single word that can be patterned and assigned to a picture-taking operation; and (3) where Imamura actually discusses a plurality of words stored together, Imamura specifies that *each different word corresponds to a different operation*. An explanation for each of these findings is provided below.

22) **FINDING 1:** Imamura describes that a singular, specific verbal pattern (also referred to as a "word" by Imamura) puts the shutter into operation, using the pronouns "a"/"the."

a. The second and third sentences of [0064] state: "When the voice obtained at the microphone 13 is analyzed to be a specific word, the shutter is put into operation. That is, as the specific word is recognized, the imaging system puts the shutter into operation." Thus, Imamura uses the singular pronouns "a"/"the" to describe what puts the shutter into operation. This indicates that in Imamura's system, only one verbal pattern ("word") is recognized for the shutter operation, as was common in the art of the time.

b. This is further confirmed by Paragraph [0073] of Imamura, which also describes simply "a" singular, specific pattern/word to trigger shutter operations:

The extracted attribute pattern is compared with a standard pattern 23. As both patterns match (pattern matching) (block 24), *the attribute pattern is recognized as a specific word*. Now with the sound detection mode set, trigger signals are sent from CPU 16 to a shutter driving block 18 and an image pickup device 19 with the result that a mechanical shutter and an electronic shutter are operated to pick up images.

- c. Imamura also recognizes that “ordinary conversations, surrounding noises or the like” may “lead to malfunction.” Imamura at [0064] states:

“With the specific word preset, the shutter is unlikely to respond to ordinary conversations, surrounding noises or the like, which may otherwise lead to malfunction.”

- d. The malfunction referenced by Imamura at [0064] is an unintended match of words used in conversations or noise being “recognized” as a command word (thereby inadvertently causing an operation to erroneously occur). For this reason, Imamura emphasizes here that “the [singular] specific word” is preset, to avoid such “malfunction.”

**23) FINDING 2:** Imamura lists three options for the *single word* that can be patterned and assigned to a picture-taking operation.

- a. Imamura at [0064] states: “For instance, such a given voice or command may be “Cheese!”, “Shutter!” or the like.”” From the words used in this sentence, I can readily understand that Imamura is providing here suggestions of what words could be spoken to create a stored verbal pattern. That is, the intent of this sentence is to provide exemplary words for the shutter command and that a single word should be chosen (from this list or otherwise). Imamura is not suggesting by this that more than one word should or could be simultaneously assigned to the same camera operation sequence.
- b. The sentence begins with the phrase “for instance.” The plain and ordinary meaning of “for instance” is “as an example, example.” I have provided as Exhibits A, B, and C to this declaration printouts from Merriam-Webster, Harper Collins, and Oxford online dictionaries confirming the same.
- c. Based on this definition, “for instance” indicates that this is a list of examples. Specifically, these are examples of what the singular, given voice or command (as discussed in the preceding sentences) corresponding to an operation may be. Consistent with the preceding sentences in Paragraph [0064], Imamura uses the

singular pronoun “a” to describe the voice or command (and not plural “commands”).

- d. In addition, the list of possible commands includes the transitional phrase “or” to indicate that the single, preset verbal pattern may be one of several mutually exclusive options – “Cheese!”, “Shutter!” or the like. In my opinion, if Imamura intended for all of these words to be simultaneously available to a user, he would have instead stated: “Cheese, Shutter, *and* the like,” or something with similar intent. For example, Paragraph [0017] of my ‘736 Application describes that the camera system understands “any of ‘shoot’, ‘snap’, ‘cheese’, and a whistle.”
- e. Selecting one of several options to be preset as the single command word is not equivalent to Claim 21(e)’s requirement for a plurality of distinct words to be “simultaneously” assigned as a command to take a picture.

**24) FINDING 3:** Where Imamura actually discusses a plurality of words stored together, Imamura specifies that *each different word corresponds to a different operation*.

- a. Imamura discusses the camera’s capability to store a plurality of verbal patterns/words [0064], [0075]. In each case, Imamura confirms that each different verbal pattern corresponds to a different operation such as “operating the shutter,” “switchover of the camera from one zoom state”, “taking mode to another,” or “turning a flash on or off.”
- b. Paragraph [0064] states (emphases added): “Further, if specific operations are allocated to *a plurality of words*, it is then possible *not only to put the shutter into operation but also to use voices to switch the camera 10 from one zoom state or taking mode over to another, and switch a flash, from ON over to OFF and vice versa, or the like.*” Here, Imamura is specific that a plurality of different words means a plurality of different operations. The plurality of different words in Imamura only makes it “possible” to control more (and different) operations by voice.

- c. Paragraph [0075] of Imamura describes the process by which a plurality of verbal patterns are registered and assigned to a plurality of different operations. When a plurality of verbal patterns is registered, each pattern corresponds to its own different operation:

“It is here noted that a plurality of verbal patterns may be registered as the standard pattern 23, and different operations are assigned to those verbal patterns. This ensures that the shutters are not only operated but also switchover of the camera 10 from one zoom state and taking mode to another, turning a flash on or off, etc. is performed by way of voices.”

- 25) I also confirm that I have carefully reviewed the entire Imamura reference, and I did not find any disclosure that I believe contradicts the three findings listed above. This further confirms my conclusion that Imamura does not disclose storing a plurality of dictionary-distinct words that are simultaneously assigned by the control program to be the same camera command to take a picture, and recognizing any of those words when spoken by a given user, as described by Claim 21 elements (d) and (e).
- 26) In addition, the first sentence of Imamura [0064] recites: “A given voice is preset.” This means that a command word existed in the system prior to the described sound detection mode operations, and this does not disclose or suggest Claim 21 elements (d) and (e).

#### **DISTINCTIONS OVER MONTULLI**

- 27) In the NFOA, the Examiner relies upon Montulli for the “automatic upload” features of pending Claim 21 (element (f)). NFOA at 8-9.
- 28) Respectfully, I disagree with the Examiner. Specifically, based on the facts explained below, Montulli does not disclose or suggest at least two features of Claim 21 element (f). Montulli does not disclose or suggest (1) “automatically upload[ing] designated pictures previously selected from among a group of pictures saved in the local memory of the camera” and (2) “automatically upload[ing] designated pictures via the WIFI interface and an internet connection from the camera system to a user-selected account associated with an email address at an internet picture hosting website.” Each of these distinctions is addressed below.

A. Montulli's User Options

- 29) Paragraph [0017] of Montulli describes its user options, of which there are four – “**save**,” “**delete**,” “**transmit**,” and “**mark**”:

FIG. 3 shows another embodiment for securely transmitting image data. In this process, the cell phone captures image data using the integrated cell phone camera (100). To minimize data transmission requirement a user may manipulate a recorded image, and the associated image data. The manipulations include a “save” option and a “delete” option. This embodiment also includes “transmit” and “mark” options. Button controls on the cell phone enable the selection of at least the delete and transmit options and optionally the save and mark options. These options for manipulating image data may be executed one image at a time or, alternatively, button controls may be used to “mark” a plurality of images for bulk manipulation of images and associated image data. Only saved images are transmitted over the WLAN. A number of images may be taken and stored on the cell phone.

- 30) None of these four user options discussed in Montulli allow a user to designate for upload only a subset of images from the group of saved images. My specific findings for each option are provided in the paragraphs below.

31) “**Save**” and “**Delete**” in Montulli

- a. Based on [0017], I conclude that Montulli describes by its explanation of the “Save” and “Delete” options that *all saved images* are transmitted over the WLAN.
- b. Montulli at [0017] first states that “[t]o minimize data transmission requirement a user may manipulate a recorded image, and the associated image data. The manipulations include a ‘save’ option and a ‘delete’ option.” Thus, to manipulate an image to minimize transmission, the user in Montulli can either select “save” or “delete” for an image.
- c. Montulli [0017] then recites: “Only saved images are transmitted over the WLAN.”
- d. These two sentences together indicate that the user of Montulli can either save or delete images (to minimize transmission), and all of the saved images are



transmitted over the WLAN. In other words, the user does not designate at least one from the group of saved photos to be transmitted – all saved photos are transmitted. No options associated with transmission size, other than the “save” or “delete” options, are provided.

- e. Neither “save” nor “delete” allows the user to designate for upload only a selected subset of images from the group of saved images. In Montulli, to exclude a certain image from being automatically uploaded, the only option available for the user is to “delete” the image from the device instead of saving it, thereby eliminating the image altogether. The user cannot save an image on the device without the saved image being automatically uploaded. The upload scenario in Montulli is “all or nothing.”

**32) “Mark” in Montulli**

- a. Montulli [0017] describes that the “mark” option is used to mark “a plurality of images for bulk manipulation of images and associated image data.”
- b. Thus, the option concerns “bulk manipulation,” allowing a user to select a group of images and then, for example, select “delete” or “save” for that group.
- c. Nothing in Montulli’s disclosure describes that the “mark” option allows a user to designate photos for upload.

**33) “Transmit” in Montulli**

- a. Montulli [0017] only says that “[b]utton controls on the cell phone enable the selection of at least the delete and transmit options....”
- b. I have reviewed the entire Montulli reference, and I have found no disclosure that describes the specific operation or purpose of its “transmit” option.
- c. Montulli does not describe how the “transmit” option affects images. Montulli does not explicitly state that the “transmit option” causes photos to be transmitted.

- d. Even assuming that the “transmit option” does cause transmission of photos, Montulli still expressly teaches that all saved photos are uploaded, as explained above. Nothing disclosed about the transmit option alters this express teaching.
- e. Because Montulli ties the automatic upload feature to whether or not the images are saved, rather than the “transmit” option, a person of ordinary skill in the art reading Montulli would read and understand the “transmit” option to be, at best, a manual transmission of all saved pictures and not an automatic, selective upload feature as Applicant claims.

34) Paragraph [0011] of Montulli describes that Montulli was concerned with “synchronization.” Montulli states:

[0011] Advantages of the system may include one or more of the following. The system **frees up the memory** in the camera for taking more pictures without having to swap out memory cards as in conventional systems. Another advantage is that it affords the user the ability to wireless **synchronize all associated multimedia assets**, such as digital photos, and/or albums that contain digital data. Thus, if a particular multimedia asset is captured, the information can be automatically uploaded to a server and **removed from the device's memory to allow additional pictures to be taken**. This synchronization is accomplished efficiently and automatically by, in one embodiment, transparently transferring newly captured images whenever the device detects an available wireless network.

35) Pending Claim 21(f) is not concerned synchronization.

- a. Montulli’s stated goal of “synchronization” shows that all saved images on the camera are automatically uploaded in order to achieve synchronization between images on the camera and images on the computer. In other words, the goal is for all saved images on the camera to also be reflected on the server. For this reason, Montulli’s user deletes images that are not to be uploaded (preventing the systems from being “out of sync”).
- b. Allowing the user to select some from among all saved images to be automatically uploaded as recited by Claim 21 could prevent synchronization

between device and server because photos may be kept on the camera that are not on the server.

**B. Montulli Describes Upload to Intermediate Servers**

- 36) Montulli also does not show automatically uploading “designated pictures via the WIFI interface and *an internet connection from the camera system* to a user-selected account associated with an email address at an internet picture hosting website” as recited by Claim 21.
- 37) As explained below, Montulli teaches always using an intermediate storage system (i.e., server, home computer, etc.) from which distribution of image information is provided over the internet – (1) photos are uploaded to a local computer/server on the WLAN, and (2) only after the first upload, the local computer/server connects and uploads the photos to an internet website.
- 38) Montulli describes uploading to a remote computer such as a desktop computer or “image server.” These computers/servers are not “photofinishers” or internet picture hosting websites.
  - a. Montulli at [0009] describes “transferring the image data from the cell phone camera to a remote computer over the WLAN without an explicit user request.”
  - b. Montulli at [0016] describes that the cell phone “transfers the image data from the cell phone camera to a remote computer over the WLAN.”
  - c. Montulli at [0018] describes transferring image data “from the cell phone camera to a remote computer over the WLAN.”
  - d. Montulli at [0024] recites that “the cell phone transfers the image data from the cell phone camera to a remote computer over the WLAN without an explicit user request. The remote computer can be an image server or can simply be a desktop computer configured with suitable software to poll the cell phones and retrieve image data from the cell phones to a directory.”

- 39) These computers/servers are used as an intermediary to transfer the image data to the photofinisher existing on the internet. Paragraph [0021] of Montulli states:

The cell phone can communicate over the WLAN to a server that is connected to the Internet. As would be evident to one of ordinary skill in the art, the server includes a CPU, hard disk, memory, and Internet access such as a modem, network interface card, or a cable modem. Having access to the Internet, the server can transfer image data from the cell phone to a photofinisher. When within range of the WLAN, the system transfer data automatically to the storage space of the remote home-based server from the data storage device of the user's cell phone. The cell phone's WLAN transceiver then transmits the pictures over the WLAN. Alternatively, when WLAN is not present and the cell phone data storage device is almost full, the cell phone can transmit images through the cellular network (preferably using 3G) to the home-based server for storage thereon. In that case, the cell phone calls the server's modem and transmits data to the server over the POTS network.

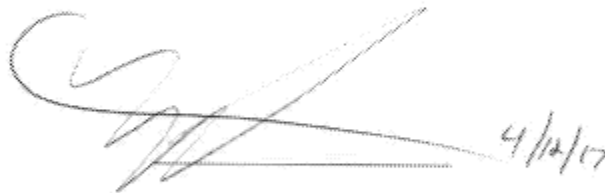
- a. Step 1 in paragraph [0021] is that the cell phone “communicates over the WLAN to the server.”
    - i. Montulli’s cell phone communicates over the WLAN to the home-based server to upload the photos.
    - ii. Similarly, the cell phone can “transmit images through the cellular network” over the POTS network by calling “the server’s modem.” This is just another form of connecting and uploading to the home-based server, and not the photofinisher or another website.
  - b. Step 2 in paragraph [0021] is that “Having access to the Internet, the server can transfer image data from the cell phone to a photofinisher.”
    - i. This describes that the home-based server is the device responsible for transferring image data over the internet to the photo finisher.
    - ii. The cell phone itself is not disclosed as automatically uploading to, or even connecting with, the photofinisher.
- 40) Montulli at [0010] describes yet another two-step upload process of first uploading to a computer/server, and then managing the pictures on that computer/server to send them to a website:

The system enables the automatic transfer of multimedia data from a camera or cell phone when in proximity of a Wireless hotspot. The system automatically senses when the multimedia device is in range of an appropriate Wireless hotspot and begin a transfer of the data to an appropriate server over the network. This mechanism allows the user to take pictures or other multimedia and not have to go through an explicit export step. The data would be made available from the new server location for printing, sharing and archiving, and any other use.

- a. The difference between Paragraph [0010] and Paragraph [0021] is that the upload in [0010] is to a “Wireless hotspot,” which is a place that has WIFI other than the user’s home. However, the upload process still does not use an internet connection between the cell phone itself and an internet picture-hosting website.
  - b. Montulli describes that the “new server location” (which is not a website) at the Wireless hotspot stores the photos, and that the user can access the data from that new server location to print archive, share, etc.
  - c. Like the “home-based server,” the user must separately access the new server location in order for the photos to be transferred over the internet to a website.
  - d. This is not a connection between a camera and the website as contemplated by Claim 21 and Paragraph [0037] of the ‘736 Application, and the generic server is not a user-selected account at the picture hosting website.
- 41)** Montulli describes the type of process that Paragraph [0037] of the ‘736 Application specification (and the pending claim) distinguishes – Montulli requires “first storing the photos to a computer system and then connecting the computer system to the internet to upload the picture.”
- a. Unlike Claim 21, which provides for upload from the camera to an account associated with an email address at virtually any internet picture hosting website, the user in Montulli needs to separately access a particular individual server that then provides internet access for the upload of the image(s) to a photofinisher or picture-hosting website, as described, for example, in Paragraphs [0010] and [0021] of Montulli. There is no connection between the camera and the internet picture hosting website during upload in Montulli.

- b. The computer to which the photos are uploaded in Montulli is not a user-selected account at the picture hosting website as claimed – it is simply a computer/server on the WLAN.
- 42) The fact that Montulli uses an intermediary server/computer prior to sending the photos to a photofinisher or other site makes perfect sense in the context of Montulli, because as I explained above, Montulli does not allow for photo designation prior to automatically uploading – all photos are uploaded and backed up to the server/computer. That server/computer has the internet access that then allows the images to be disseminated to a photofinisher, for example. In my opinion, a user would select those images to be sent to photofinishers from the server/computer used as backup.
  - a. Consistent with Montulli's discussion, the server/home computer referenced in Montulli is effectively photo backup for the cell phone that stores all pictures saved on the device, as discussed in Montulli at [0011] and explained above in this declaration.
  - b. A user of Montulli's system, which uploads all saved pictures, would not necessarily want all pictures printed or shared to a website because of cost or other concerns.
  - c. Therefore, Montulli teaches uploading all images to the intermediary server/computer, and from there, the user can access that server presumably to select which specific pictures to send via the internet to a "photofinisher" (Montulli at [0021]) or elsewhere for "printing" or "sharing" (Montulli at [0010]).

- 43) I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, and that such willful false statements may jeopardize the validity of the application or any patents issued thereon.

A handwritten signature in black ink, appearing to read 'Jeffrey C. Konicek', with a date '4/12/17' written to the right.

Executed in Champaign, IL on  
April 12, 2017

**Jeffrey C. Konicek**

4506 Southford Trace Dr  
Champaign, IL 61822  
Telephone: (217) 649-8391

Declaration under Rule 37 CFR §1.132 of Jeffrey C. Konicek dated April 12, 2017.

69. On May 2, 2017, the applicant requested an interview with the examiner and submitted an “Outline of distinctions over the Prior Art”:



**SN 15/188,736 - OUTLINE OF DISTINCTIONS OVER THE ART**

References	Applicant's Invention	Advantages/Support
<p><b>IMAMURA/CHEN:</b> These say nothing about, and are irrelevant to, auto-upload.</p> <p><b>MONTULLI:</b></p> <p><b>First Distinction:</b> The user of Montulli cannot designate from the device a subset of locally-saved pictures for automatic upload. Photo backup in Montulli is <i>all saved images</i>.</p> <p>Montulli [0017] states “Only <i>saved images are transmitted over the WLAN</i>.” Thus, the user selects either “save” or “delete” for an image, with <i>all saved images</i> transmitted. The user cannot designate for upload only a selected subset of images. To exclude an image from being automatically uploaded, the user must “<i>delete</i>” the image from the device. Konicek Decl. at ¶31.e.</p> <p>The “transmit” menu selection in Montulli is, at most, a manual transmission of all saved pictures and not an automatic, selective upload feature. Konicek Decl. at ¶33.e.</p> <p><b>Second Distinction:</b> The image upload in Montulli is to an “appropriate” server that the device must authenticate on an “appropriate” wireless local area network (“WLAN”).</p> <p>The device can upload pictures to that authenticated server “<i>over the WLAN</i>” when the device and the server are <i>both</i> connected to the <i>same</i> WLAN.</p> <p>“[0010] [T]he system automatic downloads images from a phone via... Wi-Fi protocol <i>when in proximity of a home network</i> .... The system automatically senses when the...device is in range of <i>an appropriate</i> wireless hotspot and begin a transfer of the data to an <i>appropriate server over the network</i>.”</p> <p>“[0018] Eventually, the user travels to his or her <i>home or office</i> where cell phone images are to be synchronized....When in range [of the WLAN], the cell phone <i>authenticates the server</i> (104). Upon passing authentication, the system</p>	<p>Claim 21 Element (f):</p> <p>(f) the controller configured to...</p> <p>(ii) <i>automatically upload designated pictures previously selected from among a group of pictures saved in the local memory</i> of the camera, the designated pictures uploaded via the WIFI interface <i>and an internet connection from the camera system to a user-selected account associated with an email address at an internet picture hosting website</i> as instructed by a user of the camera, but the automatic upload occurring only if predetermined conditions are met, the predetermined conditions including at least the controller receiving:</p> <p>(1) an indication from the WIFI interface that the system can make an internet connection via the WIFI interface; and</p> <p>(2) an indication from the local memory that a user <i>has elected an option to designate at least one picture from the group of pictures saved in the local memory</i> to be uploaded to the internet picture hosting website.</p>	<p>Applicant's inventive camera system allows the user to designate which pictures selected from among those saved in the local memory are <i>automatically uploaded</i> to a user-selected account associated with an email address at an internet picture hosting website, while keeping others locally. The user of Applicant's system has flexibility, among other things, <i>to designate only certain photos</i> (e.g., that are properly edited, in focus, of interest to others, or “highest priority”) without wasting system resources on uploads of unselected saved photos.</p> <p>Specification at [0036]:</p> <p>Another aspect of the present invention provides for simpler photo offloading from the modern digital camera when a set of predetermined conditions, such as day, time, number of pictures to offload, etc., are met. The camera system preferably includes the ability <i>for the user to indicate to the camera which pictures to offload so that the camera offloads only those pictures that are so indicated by the user</i>.</p> <p>Applicant's Specification and claim explicitly distinguish Montulli, by describing that photos can be uploaded <i>via an internet connection from the camera system to a user-selected account</i> at an internet picture hosting site. Applicant's specification at [0037] states the inventor's goal</p>

<p>automatically transfer the image data from the cell phone camera to a remote computer <u>over the WLAN</u>....”</p> <p>“[0021] When <i>within range of the WLAN</i>, the system transfer data automatically to the storage space of <i>the remote home-based server</i> from the data storage device of the user's cell phone. The cell phone's WLAN transceiver then transmits the pictures <u>over the WLAN</u>.”</p> <p>Alternatively, the device connects to the appropriate authenticated server by directly dialing that server's modem.</p> <p>[0021]: “[W]hen WLAN is not present and the cell phone data storage device is almost full, the cell phone can transmit images through the cellular network...to the home-based server for storage thereon. In that case, the cell phone <i>calls the server's modem</i> and transmits data to the server over the POTS network.”</p> <p>Thus, upload does not occur “via...an <i>internet connection from the camera system to a user-selected account</i> associated with an email address at an internet picture hosting website” as claimed.</p> <p>Montulli never describes an upload that occurs via an internet connection to a picture hosting site (uploads are “over the WLAN”).</p> <p>Montulli never describes that the user can select an internet location where the pictures are uploaded. Montulli's upload is always to the authenticated server also on the WLAN.</p> <p>In Montulli, <i>after</i> the image data is uploaded to the server over the WLAN, the server can distribute data over the Internet: “Having access to the Internet, <i>the server</i> can transfer image data from the cell phone to a photofinisher.” ([0021])</p> <p>Konicek sought to avoid this intermediate step of accessing a computer to upload image data over the internet. Konicek teaches sending designated images <i>from the camera</i> to selected destinations over the Internet.</p>		<p>to automatically upload to internet destinations without the need for first storing on a computer system:</p> <p>So equipped, the inventive camera system can now independently upload its pictures to <i>any of the internet-based photo printing services, such as those provided by Walmart.com, Walgreens.com, Kodak.com, etc., without the need for first storing the photos to a computer system and then connecting the computer system to the internet to upload the pictures....</i></p> <p>Providing the novel combination of a high photo-quality camera system with direct access to the internet according to this aspect of the present invention will further improve the utility of the camera system and these services.</p>
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Outline of distinctions over the Prior Art dated May 2, 2017.

70. Also on May 2, 2017, the applicant submitted an Information Disclosure Statement & Remarks:

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Title	: PICTURES USING VOICE COMMANDS AND AUTOMATIC UPLOAD		
Serial. No.	: 15/188,736	Confirmation No.	: 1033
Applicant	: Jeffrey C. Konicek	TC/A.U.	: 2852
Filed	: June 21, 2016	Examiner	: Rodney E. Fuller
Docket No.	: Torpere-F04-513		
Customer No.	: 107554		

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**INFORMATION DISCLOSURE STATEMENT & REMARKS**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Dear Examiner:

Pursuant to 37 C.F.R. §§ 1.97 and 1.98, Applicant files herewith a substitute Form SB-08 listing references which Applicant recently received. This IDS is being filed after a first office action on the merits. Accordingly, Applicant provides herewith the fee set forth in § 1.17(p). As stated in 37 C.F.R. § 1.97, the filing of this IDS is not and shall not be construed as an admission that the information cited in the statement is, or is considered to be, material to patentability as defined in § 1.56(b). Applicant notes the references cited in this IDS may not qualify as prior art, and Applicant expressly reserves the right to antedate the cited references, as appropriate.

The attached Form SB-08 cites several documents Applicant received or filed during prosecution of related applications, including office actions, patents and publications cited therein, and Applicant's responses. The Form SB-08 also cites an additional NPL reference recently brought to Applicant's attention: "Voice Commands for BMW 5 Series & 6 Series MY2004 equipped with CCC," by BMW Group (Date Unknown) (hereinafter "BMW Voice List"). Copies of all NPL references are provided herewith.

**I. Office Actions and Related References**

Applicant recently received or filed the following documents/references during prosecution of related cases:

- Response to Non-Final Office Action in U.S. Patent Application No. 14/539,687 (05/04/2016);
- Notice of Allowance in U.S. Patent Application No. 14/539,687, Primary Examiner Rodney E. Fuller (07/15/2016);
- Non-Final Office Action in U.S. Patent Application No. 14/950,338 (10/07/2016);
- Non-Final Office Action in U.S. Patent Application No. 14/614,515 (03/06/2017);
- Response to Non-Final Office Action in U.S. Patent Application No. 14/950,338 (04/07/2017);
- Declaration of Jeffrey C. Konicek Under Rule 1.132 in U.S. Patent Application No. 14/950,338 (04/07/2017);
- U.S. Patent 5,729,289 to Etoh;
- U.S. Patent 7,340,766 to Nagao;
- U.S. Patent 6,393,216 to Ootsuka, et al.;
- U.S. Pub. 2006/0061663 to Park;\*;
- U.S. Pub. 2006/0223503 to Muhonen, et al.\*;
- U.S. Pub. 2002/0005907 to Alten;
- U.S. Pub. 2003/0030731 to Colby;
- U.S. Pub. 2002/0140803 to Gutta, et al.;
- U.S. Pub. 2003/0175010 to Nomura, et al.;
- U.S. Pub. 2006/0282572 to Steinberg, et al.;
- U.S. Pub. 2004/0140971 to Yamazaki, et al.;
- U.S. Pub. 2006/0139459 to Zhong.

The patents and publications marked above with an asterisk were affirmatively relied upon by the Examiner in making a rejection.

The attached Form SB-08 also cites U.S. Pub. 2006/0189348 to Montulli (“‘348 Montulli”). The ‘348 Montulli publication fails to disclose or obviate Applicant’s claims for at least the same reasons as ‘349 Montulli, as explained in detail in Applicant’s Response to NFOA herein filed on April 12, 2017. Specifically, the user of ‘348 Montulli cannot designate from the device a subset of locally-saved pictures for *automatic* upload – all saved files are “synchronized” between two devices. *See, e.g.*, ‘348 Montulli at [0012], [0024], [0025]. In addition, ‘348 Montulli never describes an automatic upload that occurs via an internet connection to a picture hosting site –automatic uploads are “over the WLAN” between two devices connected to the same WLAN. *See, e.g.*, ‘348 Montulli at [0011], [0012], [0023].

[0024], [0025]. ‘348 Montulli also never describes that the user can select an internet location where the pictures are automatically uploaded, because Montulli’s upload is to an authenticated server or device on the local WLAN. *Id.*

Applicant is currently reviewing Park and Muhonen and drafting a Response to Non-Final Office Action in U.S. Patent Application No. 14/614,515 addressing those publications. Applicant will provide that response in a subsequent information disclosure statement if appropriate.

## **II. BMW Voice List**

The exact publication date, or even the publication year, of BMW Voice List NPL reference is not printed on the document. Therefore, BMW Voice list is not prior art on its face, and Applicant does not admit that it is prior art. In addition, BMW Voice List fails to disclose or obviate the features of Applicant’s claims for at least the reasons discussed below.

### **A. BMW Voice List Does Not Disclose Multiple Command Words Simultaneously Assigned to the Same Camera Operation**

BMW Voice List does not describe anything relating to cameras or picture-taking. For this reason, it cannot disclose or suggest more than one voice command being simultaneously assigned by the control program to the same picture-taking operations as claimed.

BMW Voice List contains very minimal explanation or background information. BMW Voice List includes three columns: “speech command,” “device,” and “command.” The meaning of the “device” and “command” columns, or how they relate to “speech commands,” is not explained by BMW Voice List.

The “device” column lists devices relating to the vehicle, including “cd,” “radio,” “preheater,” “phone,” “navi,” etc., but nothing specific is explained regarding these devices or their operations. The “speech commands” listed in the first column may relate to the listed devices, but the device column does not list *any operations* for these devices corresponding to the speech commands. Therefore, the device column does not disclose or suggest that a plurality of speech commands are simultaneously assigned to trigger the same sequence of *operations* – at best, the column shows that certain speech commands relate to certain devices.

Similarly, the BMW Voice List does not explain explicitly what the “command” column represents. The context of BMW Voice List reveals that the “command” column, at most, describes a category of operations (such as menu-related operations), but not a specific

operation corresponding to a specific speech command. For example, the word “menu” appears more than 90 times in the “command” column, in many different contexts and in association with many different “speech commands” and “devices.” However, no conclusion can be reached on what exact “menu” is referenced in each instance. More importantly, BMW Voice List does not describe *the function or operation* for a particular menu that each speech command is assigned to – all that can be gathered is that certain speech commands relate to menus. Neither a specific menu nor a specific operation for that menu is described by the “command” column.

Accordingly, BMW Voice List does not disclose or suggest that multiple distinct speech commands are simultaneously assigned to the same operation for a device.

**B. The BMW Voice List is not Analogous Art**

In addition to the above, BMW Voice List is not analogous art to the claimed invention, and thus, it is not appropriate for use in any rejection of the claims under § 103.

In order for a reference to be proper for use in an obviousness rejection under 35 U.S.C. § 103, the reference *must be analogous art* to the claimed invention. MPEP 2141.01(a)(I); *In re Bigio*, 381 F.3d 1320, 1325, 72 USPQ2d 1209, 1212 (Fed. Cir. 2004). A reference is analogous art to the claimed invention only if: (1) the reference is from the same field of endeavor as the claimed invention (even if it addresses a different problem); or (2) the reference is reasonably pertinent to the problem faced by the inventor (even if it is not in the same field of endeavor as the claimed invention). *See Bigio*, 381 F.3d at 1325, 72 USPQ2d at 1212. While Patent Office classification of references and the cross-references in the official search notes of the class definitions are some evidence of “nonanalogy” or “analogy” respectively, the court has found “the similarities and differences in structure and function of the inventions to carry far greater weight” in determining whether a reference is analogous art. *In re Ellis*, 476 F.2d 1370, 1372, 177 USPQ 526, 527 (CCPA 1973).

First, BMW Voice List is not in the same field of endeavor as the claimed invention. The CCC is a “Car Communication Computer” system for navigation and controlling other aspects of a vehicle. It is not a camera, and it cannot take pictures – not a single picture-taking or camera-related operation is disclosed in the reference. The CCC is not even a portable handheld device – it is a large computer system installed on vehicle (it is even called a “car communication *computer*”). Thus, both the structure and the function of the CCC system are

completely different from the claimed invention – structurally, it is a large computer system for a vehicle and not a portable device, and functionally, it cannot control cameras at all.

The CCC is also not reasonably pertinent to the problem faced by the inventor. Mr. Konicek recognized the problem that associating one vocalization or utterance to one camera operation reduces the utility of voice recognition for a camera user, who would have to know and memorize the single word corresponding to the command to take a picture. *See, e.g.*, Specification at [0002]. In other words, Applicant’s invention allows a user generally familiar with camera nomenclature to be able to pick up the camera and operate it using voice commands – several distinct commands for taking the picture (such as “shoot”, “snap”, or “cheese”) are all available to the user. *See, e.g.*, Specification at [0017]. BMW Voice List is not directed to, nor does it solve the problem identified by Mr. Konicek as it describes nothing relating to controlling camera operations by voice.

Because BMW Voice List has nothing to do with cameras, it also does not disclose or obviate the automatic upload features of Applicant’s claims. For these reasons, Applicant respectfully submits that BMW Voice List does not disclose, suggest, or obviate Applicant’s claims.

### **III. Conclusion**

If the Examiner has any questions regarding this IDS or the information submitted herewith, the Examiner is encouraged to contact the undersigned counsel.

Date: May 2, 2017

Respectfully Submitted,

By Justin J. Lesko/

Justin J. Lesko, Esq.  
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Information Disclosure Statement & Remarks dated May 2, 2017.

71. On May 4, 2017, there was an interview between the applicant and the examiner in which Montulli et al (U.S. Publication No. 2006/0189349) and Colby (U.S. Publication No. 2003/0030731) were discussed. *See* Applicant-Initiated Interview Summary dated May 9, 2017.



72. On June 12, 2017, there was another interview between the applicant and the examiner in which Montulli et al (U.S. Publication No. 2006/0189349) and Colby (U.S. Publication No. 2003/0030731) were discussed. *See* Applicant-Initiated Interview Summary dated June 15, 2017. The applicant also provided an “Outline of Distinctions over Colby”:

**SN 15/188,736 - OUTLINE OF DISTINCTIONS OVER COLBY**

References	Applicant's Invention	Advantages/Support
<p><b>COLBY:</b> Colby does not have a WIFI interface, and therefore it does not upload or auto-upload via the internet on WIFI.</p> <p>More importantly, like Montulli, Colby does not describe that a subset of images from saved images can be designated to be <i>automatically</i> uploaded to the internet site when WIFI internet is available.</p> <p>The “marking” described by Colby is for selecting and sending certain photos in an embodiment where the transmission is <u>manually</u> initiated by the user.</p> <p>Colby at [0046]: “Embodiments also include <i>other modes of operation</i> wherein a user marks recorded images for transmission. Marking optionally occurs during or after viewing the image in an instance of step 420. Images are optionally transmitted <i>one at a time once they are marked</i> or, alternatively, <i>a plurality of marked images are sent in “bulk” in a single transmission.</i>”</p> <p>Colby never describes an automatic upload scenario for a subset of previously “marked” or otherwise selected images - a one at a time transmission or bulk single transmission occurs for “marked” images (i.e., the resulting upload from marking is manual).</p> <p>The “<i>automatic</i>” upload embodiments of Colby are <i>not</i> dependent upon user designation of photos, nor are they dependent upon receiving an indication that internet via WIFI is available. By “automatic,” Colby is referring to 1) immediately transferring photos as they are taken, (2) transmitting photos when memory is “full,” (3) transmitting photos at a certain time of day, or (4) transmitting photos when the camera gets turned on/off.</p> <p>More importantly, in <i>none</i> of these automatic upload <i>embodiments</i> does Colby describe that a subset of saved images are designated before upload.</p> <p>[0046] In a step 430 images are selected for</p>	<p>Claim 21 Element (f):</p> <p>(f) the controller configured to...</p> <p>(ii) <i>automatically upload designated pictures previously selected from among a group of pictures saved in the local memory</i> of the camera, the designated pictures uploaded via the WIFI interface <i>and an internet connection from the camera system to a user-selected account associated with an email address at an internet picture hosting website</i> as instructed by a user of the camera, but the automatic upload occurring only if predetermined conditions are met, the predetermined conditions including at least the controller receiving:</p> <p>(1) an indication from the WIFI interface that the system can make an internet connection via the WIFI interface; and</p> <p>(2) an indication from the local memory</p>	<p>Applicant's inventive camera system allows the user to designate which pictures selected from among those saved in the local memory are <i>automatically uploaded</i> to a user-selected account associated with an email address at an internet picture hosting website, while keeping others locally. The user of Applicant's system has flexibility, among other things, <i>to designate only certain photos</i> without wasting system resources on automatic uploads of unselected saved photos. The upload occurs when internet via WIFI is or becomes available without requiring the user to select the photos again or manually initiate upload.</p> <p>Specification at [0036]:</p> <p>Another aspect of the present invention provides for simpler photo offloading from the modern digital camera when a set of predetermined conditions, such as day, time, number of pictures to offload, etc., are met. The camera system preferably includes the ability <i>for the user to indicate to the camera</i></p>

<p>transmission. One embodiment includes a mode of operation wherein step 430 automatically includes <u>all available images</u> and, thus, requires no input from the user. One embodiment includes a mode in which <u>each image is transmitted shortly after recording</u>. One embodiment includes a mode in which images are transmitted <u>when available image memory drops below a predetermined value</u>. ....Other embodiments include modes wherein images are transmitted <u>after a predetermined number of images have been recorded, at a specific time of day, when digital camera 100 is turned on or off</u>, or when a user executes a “transmit” command.</p> <p>[0048] In a step 440 images are transferred to an address programmed in step 405 and possibly modified in step 435....In an embodiment of the invention, step 440 is performed <u>automatically after image data is recorded in step 410</u>.</p> <p>[0054] Any of steps 430 through 465 are optionally performed automatically without further input from a user. Thus, in one embodiment of the invention, <u>once an image (image data) is stored in step 415 it is automatically transmitted</u> to processing system 159 and then automatically delivered to a destination pre-selected by the user. For example, in one of these embodiments, <u>as a user records images</u>, the images are automatically delivered to an e-mail account or Web page....</p> <p>[0063] The transfer (transmission) of image data from digital camera 100 to processing system 159 is optionally automatic. For example, in one embodiment the transfer occurs without further input from a user <u>whenever an image is recorded</u>....</p> <p>The photos cannot be designated for an automatic upload that occurs <b>upon detection of internet via WIFI</b> (and indeed, WIFI is not even involved).</p>	<p>that a user <i>has elected an option to designate at least one picture from the group of pictures saved in the local memory</i> to be uploaded to the internet picture hosting website.</p>	<p><i>which pictures to offload so that the camera offloads only those pictures that are so indicated by the user.</i></p> <p>Specification at [0038]:</p> <p>In an enhancement to the above-disclosed embodiments of this aspect of the invention, the inventive camera system is operable for being instructed to <i>automatically initiate a connection to the internet, LAN, printer, etc. whenever the predetermined conditions are met and it is in range of the network connection</i>, (e.g., WIFI, Bluetooth, wireless USB, wired LAN, etc).</p>
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73. On June 19, 2017, the examiner issued a final rejection:

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**DETAILED ACTION**

1. The present application is being examined under the pre-AIA first to invent provisions.

***Remarks***

2. In response to the Office Action mailed 10/12/2017, the applicant amended the Drawings and Specification to overcome the objects set forth in the action. The examiner withdraws the objection to the Drawings set forth in the Office Action mailed 10/12/2017.

3. Regarding the 35 U.S.C. 103(a) rejection of claims 21, 28-35 and 37-40 as being unpatentable over Imamura (US 2005/0168579) in view of Schrock, et al. (US 5,923,908) and Montulli, et al. (US 2006/0189349) set forth in the Office Action mailed 10/12/2017, the applicant cancelled claim 27 and amended claims 21 and 40. Claims 21-26 and 28-40 are pending.

4. On May 4, 2017, an interview was conducted with the applicant. The examiner agreed that the amendment would overcome the rejection based on the limitation related to designated pictures to be uploaded from a group of photos saved in memory. Montulli (US 2006/0189349) states (paragraph 0017) "Only saved images are transmitted over the WLAN" in comparison to the amended claim limitation "automatically upload designated pictures previously selected from among a group of pictures saved." During the interview the examiner noted at Colby (US 2003/0030731) may read on this amended limitation. Colby teaches (paragraph 0012) "controls

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configured to transmit image data from a plurality of image data and to initiate the transfer of the image data".

5. On June 12, 2017, a second interview was conducted with the applicant to discuss Colby (US 2003/0030731). The applicant argued that Colby teaches selecting images and transmitting the images manually and not automatically. Further, the applicant argued that Montulli (US 2006/0189349) cites language from Colby, and that the combination of Montulli and Colby would not teach automatically sending images that were selected from a group of saved pictures. No agreement was reached regarding the allowability of the claims.

6. After further review, the examiner maintains that Montulli (2003/0030731) could be further modified by Colby to teach the limitations of claims. However, to expedite the examination, an updated search was conducted. Newly cited references Montulli, et al. (US 2006/0189348) and Rothshild (US2006/011433) clearly teach wherein the automatic upload of images are dependent upon user designation of photos and dependent upon receiving an indication that internet via WIFI is available.

a. Montulli, et al. (US2006/0189348): (paragraph 0012): "the system downloads images from a phone via Bluetooth or Wi-Fi protocol when in proximity of a home network"; (paragraph 0021): "to minimize data transmission requirement a user may indicate that images may be shared one at a time or, alternatively, a plurality of images can be marked for sharing/synchronization of images and associated image data. Only selected images are then shared..."

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b. Rothshchild (US 2006/0114338): (paragraph 0050): "The user is now asked via text input or voice recognition or any other input means, whether they will be storing these photos online. The answer would be either Yes or No.... and selected photos would automatically go to that location for upload when the digital images are transferred"; (paragraph 0056): "With a connection to the Global Computer Network, automatically upload the photos...".

7. Thus, the rejection set forth in the Office Action mailed 10/12/2016 has been modified by replacing Montulli, et al. (US 2006/0189349) with Montulli, et al. (US2006/0189348), and in the alternative, with Rothshchild (US 2006/0114338).

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 21, 28-35 and 37-40 is/are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Imamura (US 2005/0168579) in view of Schrock, et al. (US 5,923,908), Shah, et al. (US 2006/004132) and Montulli, et al. (US2006/0189348), or in the alternative, over

Imamura (US 2005/0168579) in view of Schrock, et al. (US 5,923,908), Shah, et al. (US 2006/004132) and Rothshchild (US 2006/0114338).

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Regarding claim 21, Imamura discloses "(a) a camera that is operable to take and store pictures (Fig. 4, ref.# 10), and that includes: (i) a lens (Fig. 1b, ref.# 3), (ii) an image sensor (Fig. 1b, ref.# 4), (iii) at least one microphone (Fig. 4, ref.# 13), (iv) a voice recognizer (Fig. 6, ref.# 20), (v) a controller (Fig. 5, ref.# 16), "... (b) the controller including a control program having instructions to control and respond to the voice recognizer (paragraph 0073); (c) the voice recognizer coupled to the at least one microphone and the controller (See Figure 6), and configured to receive and process sounds into recognized words (paragraph 0064); (d) the camera further configured to maintain and store a plurality of recognizable words having different plain meanings and commonly associated with taking a picture, the recognition of any of which will cause the camera to take a picture (paragraph 0064: shutter operation with voice command: cheese, shutter or the like); (e) wherein the voice recognizer is operable to receive a first and a second human sound spoken by the same person, and the voice recognizer is operable to recognize: (i) the first human sound as a first human spoken word from among the plurality, the recognized first human spoken word being assigned by the control program to be a command for the camera to take a picture (paragraph 0064), and (ii) the second human sound as a second human spoken word from among the plurality, the recognized second human spoken word being different from the first human spoken word and also assigned by the control program to be the same camera command to take a picture (paragraph 0064); (f) the controller configured to: (i) cause the camera to take a picture in response to the voice recognizer recognizing either the

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first or second human spoken word and to store the picture in a local memory in the camera (paragraph 0064)."

Regarding claims 21, 37 and 38, Imamura discloses a camera with voice recognition without specific reference to a touch sensitive display. Thus, Imamura does not teach:

(Claim 21): "(vii) a touch sensitive display";

(Claim 37): "further comprising a zoom lens coupled to the controller, wherein the controller is configured to accept user input from the touch sensitive display screen to determine the amount of zoom to be imparted to the zoom lens"; and

(Claim 38) "wherein the controller is configured to receive input regarding focus of the lens from the touch sensitive display."

However, a camera with a touch sensitive screen was well known in the art at the time the invention was made as evident from the teaching of Schrock (See Fig. 2, ref.# 22 (screen), ref.# 24, 26 (housed stylus), column 1, lines 55-60 (image overlay), column 2, lines 20-30 (touch screen zoom control). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Imamura by including a touch sensitive screen to adjust zoom and focus in order to inhibit vibrations by not having to rely on physical buttons to control the camera.

Further regarding claim 21, Imamura does not teach "(vi) a WIFI interface"...

"and (ii) automatically upload designated pictures previously selected from among a group of pictures saved in the local memory of the camera, the designated pictures uploaded via the WIFI interface and an internet connection from the camera



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system to a user-selected account associated with an email address at an internet picture hosting website as instructed by a user of the camera, but the automatic upload occurring only if predetermined conditions are met, the predetermined conditions including at least the controller receiving: (1) an indication from the WIFI interface that the system can make an internet connection via the WIFI interface; and (2) an indication from the local memory that a user has elected an option to designate at least one picture from the group of pictures saved in the local memory to be uploaded to the internet picture hosting website." Further related claims 39 and 49 are not taught by Imamura, i.e., (Claim 39): "wherein the controller is configured to cause pictures to be uploaded over the internet for storage at an internet picture hosting website and to be transmitted to another party" and (Claim 40) "wherein the controller is configured to enable the user to select specific pictures stored in the local memory to be uploaded to the internet picture hosting website."

However, a camera that utilizes a WIFI interface and automatically uploads pictures with an internet connection is made and when pictures have been selected for upload was well known in the art at the time the invention was made as evident from the teaching of Montulli (See paragraphs 0012 and 0021), or alternatively, from the teaching of Rothshchild (US 2006/0114338) (See paragraphs 0050 and 0056). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Imamura by including a WIFI interface as taught by Montulli, (or alternatively, by Rothschild), that uploads images when an internet connection is made and when the

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images are selected to be uploaded in order to free up memory in the camera for taking more pictures and to synchronize multiple multimedia assets.

Further, regarding the limitation of uploading the pictures "from the camera to a user-selected account associated with an email address", the use of a multimedia device (i.e., camera and/or cellphone) that is configured to automatically send a photo to an email account was well known in the art at the time the invention was made as evident from the teaching of Shah (See paragraph 0041; Figure 1: e-mail). Thus, it would have been obvious to further modify Imamura to allow the controller to send a photo to a location associated with an e-mail account in order to share photos remotely and to free memory for taking additional photos.

Regarding claim 28, Imamura discloses "wherein the plurality of recognizable words having different plain meanings and commonly associated with taking a picture are pre-assigned." (paragraph 0064: cheese, shutter)

Regarding claim 29, Imamura discloses "wherein the camera is configured to learn words from user input for the voice recognizer to recognize and for the controller to associate with specific commands." (paragraph 0064: specific operations allocated to a plurality of words)

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Regarding claim 30, Imamura discloses "wherein the camera includes an indicator that is activated if the voice recognizer is unable to recognize a command from a sound received at the microphone."

Regarding claim 31, Imamura discloses "wherein one of the words is "snap."  
 (paragraph 0064: command may be cheese, shutter **or the like**)

Regarding claim 32, Imamura discloses "wherein one of the words is "cheese."  
 (paragraph 0064: command may be **cheese**, shutter or the like)

Regarding claim 33, Imamura discloses "wherein one of the words is "shoot."  
 (paragraph 0064: command may be cheese, shutter **or the like**)

Regarding claim 34, Imamura discloses "wherein one of the words is "click."  
 (paragraph 0064: command may be cheese, shutter **or the like**)

Regarding claim 35, Imamura discloses "wherein the voice recognizer is configured to receive and process a third human sound to be recognized as a third word that is different from the first and second words and is used by the control program to perform a second camera command." (paragraph 0064: specific operations are allocated to a plurality of words)

10. Claims 22-25 is/are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Imamura (US 2005/0168579) in view of Schrock, et al. (US

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5,923,908), Shah, et al. (US 2006/004132) and Montulli, et al. (US 2006/0189348) (or alternatively, Rothshild (US 2006/0114338)) and further in view of Rubinstein (US 2008/0096587).

Modified Imamura does not specifically set forth the apparatus includes a cell phone." Thus, modified Imamura does not teach:

(Claim 22) "wherein the system further comprises a cell phone;"

(Claim 23) "wherein the controller is configured to determine if the recognized word is for one of either camera operation or cell phone operation;"

(Claim 24) "wherein the voice recognizer is configured to recognize at least one spoken word to control dialing of the cell phone;"

(Claim 25) "wherein the voice recognizer is configured to recognize spoken words in association with text messaging over the cell phone."

However, the use of a camera combined with an integrated cell phone that utilizes voice recognition for dialing the phone and/or for text messaging was well known in the art at the time the invention was made as evident from the teaching of Rubinstein (See paragraph 0064). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize the camera system of Imamura with an integrated cell phone that also utilizes voice recognition to dial the phone and for text messaging in order to form a multipurpose cellphone / camera system that utilizes a common voice recognition system.

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11. Claims 26 is/are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Imamura (US 2005/0168579) in view of Schrock, et al. (US 5,923,908), Shah, et al. (US 2006/004132) and Montulli, et al. (US 2006/0189348) (or alternatively, Rothshild (US 2006/0114338)) and further in view of Hietala, et al. (US 2006/0097993).

Modified Imamura does not teach "wherein the controller is further configured to execute an internet browser program and display the internet picture hosting website on the touch sensitive display." However, the use of a multimedia device with a touch sensitive display (i.e., camera and/or cellphone) that is configured to execute an internet browser on the display was well known in the art at the time the invention was made as evident from the teaching of Hietala (See paragraph 0031). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to allow the controller to execute an internet browser in order to allow the user to control the website to which a photo is to be uploaded.

12. Claim 36 is/are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over Imamura (US 2005/0168579) in view of Schrock, et al. (US 5,923,908), Shah, et al. (US 2006/004132), Montulli, et al. (US 2006/0189348) (or alternatively, Rothshild (US 2006/0114338)) and further in view of Ress, et al. (US 2005/0128311).

Modified Imamura does not specifically teach (Claim 36) "wherein the controller is configured to delay the second camera command for an intentional period of time after the voice recognizer recognizes the third word." However, the use of a voice

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activated camera to take remote or a self-portrait with a delay was well known in the art at the time the invention was made as evident from the teaching of Ress (See paragraphs 0001, 0019, 0021). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Imamura such that the delay is specific to a self-portrait camera mode to allow the user to get in front of the camera lens and prepare to be photographed.

### ***Conclusion***

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- a. Anderson; Eric US 20060182045 A1
- b. Anderson; Eric C. et al. US 6636259 B1
- c. Arcas; Blaise Aquera y et al. US 20060176305 A1
- d. Bateman, John D. et al. US 20040003151 A1
- e. Colby, Steven M. US 20030030731 A1
- f. Delaney, Beth M. P. US 20050052548 A1
- g. Graves, Roger US 20050055636 A1
- h. Herbert; Leslie Beth US 7286256 B2-
- i. Johns, Mark et al. US 20050097173 A1
- j. Khedouri; Robert K. et al. US 20060008256 A1
- k. McIntyre, Dale F. et al. US 20040201709 A1
- l. Morris, Robert P. et al. US 20040172419 A1

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- m. Pechi, Yuval Joshua et al. US 20050273489 A1
- n. Rea, David D. et al. US 20050036034 A1
- o. Rothschild; Leigh M. US 20060114514 A1
- p. Rothschild; Leigh M. US 20060114337 A1
- q. Rothschild; Leigh M. US 20060114516 A1

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to RODNEY FULLER whose telephone number is (571)272-2118. The examiner can normally be reached on 8:00am - 4:30pm.

Examiner interviews are available via telephone, in-person, and video conferencing using a USPTO supplied web-based collaboration tool. To schedule an

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interview, applicant is encouraged to use the USPTO Automated Interview Request (AIR) at <http://www.uspto.gov/interviewpractice>.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Clayton Laballe can be reached on 571-272-1594. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/RODNEY FULLER/  
Primary Examiner, Art Unit 2852

June 14, 2017

Office Action mailed June 19, 2017.

74. On December 7, 2017, there was an interview between the applicant and the examiner in which Colby (U.S. Publication No. 2003/0030731) was discussed. *See* Applicant-Initiated Interview Summary dated December 12, 2017. The “Applicant added limitations relating



to limiting cellular network access fees in claim 21 apparently to overcome the current rejection.” Applicant also reviewed the current application to show support for the proposed amendments.”

75. On December 11, 2017, in response to the final rejections over the prior art, the applicant amended the claims as follows:

**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application.

1 – 20. (Canceled)

21. (Currently Amended) A camera system comprising:

(a) a camera that is operable to take and store pictures, and that includes: (i) a lens, (ii) an image sensor, (iii) at least one microphone, (iv) a voice recognizer, (v) a controller, (vi) a cellular~~WiFi~~ interface, and (vii) a touch sensitive display;

(b) the controller including a control program having instructions to control and respond to the voice recognizer;

(c) the voice recognizer coupled to the at least one microphone and the controller, and configured to receive and process sounds into recognized words;

(d) the camera further configured to maintain and store a plurality of recognizable words having different plain meanings and commonly associated with taking a picture, the recognition of any of which will cause the camera to take a picture;

(e) wherein the voice recognizer is operable to receive a first and a second human sound spoken by the same person, and the voice recognizer is operable to recognize using speaker-independent voice-recognition:

(i) the first human sound as a first human spoken word from among the plurality, the recognized first human spoken word being assigned by the control program to be a command for the camera to take a picture, and

(ii) the second human sound as a second human spoken word from among the plurality, the recognized second human spoken word being different from the first human spoken word and also simultaneously assigned by the control program to be the same camera command to take a picture;

(f) the controller configured to:

(i) cause the camera to take a picture in response to the voice recognizer recognizing either the first or second human spoken word and to save the picture in a local memory in the camera;

(i) receive, via the touch sensitive display, a user selection of an upload option that instructs the device to confine automatic picture upload to periods without potential cellular network access fees; and

(ii) automatically upload designated pictures previously selected from among a group of pictures saved in the local memory of the camera, the designated pictures uploaded via the ~~cellular~~WiFi interface and an internet connection from the camera system to a user-selected account associated with an email address at an internet picture hosting website as instructed by a user of the camera, but the automatic upload occurring only if predetermined conditions are met, the predetermined conditions including at least the controller receiving:

(1) an indication from the cellular interface that the upload is acceptable based on the selected upload option;

(2) an indication from the ~~cellular~~WiFi interface that the system can make an internet connection via the ~~cellular~~WiFi interface; and

(~~2~~3) an indication from the local memory that a user has elected an option to designate at least one picture from the group of pictures saved in the local memory to be uploaded to the internet picture hosting website.

22. (Previously Presented) The camera system of claim 21 wherein the system further comprises a cell phone.

23. (Previously Presented) The camera system of claim 22 wherein the controller is configured to determine if the recognized word is for one of either a camera operation or a cell phone operation.

24. (Previously Presented) The camera system of claim 22 wherein the voice recognizer is configured to recognize at least one spoken word to control dialing of the cell phone.

25. (Previously Presented) The camera system of claim 22 wherein the voice recognizer is configured to recognize spoken words in association with text messaging over the cell phone.

26. (Previously Presented) The camera system of claim 21 wherein the controller is further configured to execute an internet browser program and display the internet picture hosting website on the touch sensitive display.

27. (Canceled).

28. (Previously Presented) The camera system of claim 21 wherein the plurality of recognizable words having different plain meanings and commonly associated with taking a picture are pre-assigned.

29. (Previously Presented) The camera system of claim 21 wherein the camera is configured to learn words from user input for the voice recognizer to recognize and for the controller to associate with specific commands.

30. (Previously Presented) The camera system of claim 21 wherein the camera includes an indicator that is activated if the voice recognizer is unable to recognize a command from a sound received at the microphone.

31. (Previously Presented) The camera system of claim 21 wherein one of the words is "snap."

32. (Previously Presented) The camera system of claim 21 wherein one of the words is "cheese."

33. (Previously Presented) The camera system of claim 21 wherein one of the words is "shoot."

34. (Previously Presented) The camera system of claim 21 wherein one of the words is "click."

35. (Previously Presented) The camera system of claim 21 wherein the voice recognizer is configured to receive and process a third human sound to be recognized as a third word that is different from the first and second words and is used by the control program to perform a second camera command.

36. (Previously Presented) The camera system of claim 35 wherein the controller is configured to delay the second camera command for an intentional period of time after the voice recognizer recognizes the third word.

37. (Previously Presented) The camera system of claim 21 further comprising a zoom lens coupled to the controller, wherein the controller is configured to accept user input from the touch sensitive display screen to determine the amount of zoom to be imparted to the zoom lens.

38. (Previously Presented) The camera system of claim 21 wherein the controller is configured to receive input regarding focus of the lens from the touch sensitive display.

39. (Previously Presented) The camera system of claim 21 wherein the controller is configured to cause pictures to be uploaded over the internet for storage at an internet picture hosting website and to be transmitted to another party.

40. (Previously Presented) The camera system of claim 21 wherein the controller is configured to enable the user to select specific pictures saved in the local memory to be uploaded to the internet picture hosting website.

Amendment to the Claims dated Dec. 11, 2017.

76. On December 11, 2017, the applicant made the following arguments in an attempt to overcome the prior art rejections:

**REMARKS**

Applicant is in receipt of the Examiner's June 19, 2017 Final Office Action ("FOA"). Claims 21-26 and 28-40 are currently pending.

**Examiner Interview Summary**

Counsel of record Justin Lesko, the inventor Jeff Konicek, and the Examiner Rodney Fuller conducted an interview on December 7, 2017. During the interview, Applicant presented this amendment and explained that the claims as amended are in condition for allowance.

The Examiner asked whether the amended claims are supported by the specification. Applicant pointed to at least Paragraph [0038] of the specification, which discusses "confin[ing] picture transmission to periods of low network usage or periods of cheaper network access." Applicant explained to the Examiner that this statement is applicable to cellular uploads as claimed, and the Examiner agreed.

The Examiner asked whether the current claims are patentable over Colby (Pub. No. 2003/0030731), which purportedly allows a user to "designate a time of day" for picture uploads. Applicant distinguished the present claims from a "timer." Specifically, Applicant used the hypothetical example of an egg timer vs. a device that determines when an egg is actually finished. In a timer scenario, cook time is set – and the device will stop cooking the egg at a designated time, regardless of whether the egg is "done." On the other hand, a device that actually determines whether an egg is "done" monitors the specific conditions of the egg and only stops cooking it when the conditions are right. Applicant's invention is comparable to the latter example and offers many explicit benefits over a simple timer. For example, a simple timer for picture upload (i.e., setting the upload for 8 PM) would still result in charges to a user's account if the user is "roaming" at the designated time that the upload begins. In short, a timer does not adequately prevent roaming or other network charges that can be incurred during photo uploads. Applicant also pointed out that the Colby reference fails to disclose or suggest the claims for many other reasons, and urged the Examiner to review the claims as a whole in determining their patentability.

The Examiner and Applicant agreed that Montulli and Rothschild are not direct to automatic uploads over a cellular network.

Finally, the Examiner agreed that the current rejection was overcome, but stated that he needed additional time to consider whether the claims are in condition for allowance. Applicant agreed to submit an after final amendment under the AFCP 2.0.

Accordingly, in the interest of compact prosecution, and without prejudice to our disclaimer of the previously claimed subject matter (which Applicant reserves the right to pursue in this or a related application), Applicant has amended Claim 21.

In view of the above, Applicant believes that claims 21-26 and 28-40 are in condition for allowance. If the Examiner has any questions or believes an interview would expedite prosecution of this case, please contact the undersigned.

Respectfully Submitted,

/Justin J. Lesko/

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Dated: December 11, 2017

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Remarks dated Dec. 11, 2017.

77. The examiner allowed the claims on January 19, 2018. *See* Notice of Allowance dated Jan. 19, 2018.

## VI. CLAIM INTERPRETATION

78. It is my understanding that in this case the parties dispute the meaning of several terms of each of the Asserted Patents. I have formed opinions with respect to only the following “controller configured to . . .” claim limitations at the present time:<sup>3</sup>

Claim Term/Phrase	CEV’s Proposed Construction	T-Mobile’s Proposed Construction
<p>“(f) a controller configured to: (i) receive, via the touch sensitive display, a user selection of an upload option that instructs the device to confine automatic picture upload to periods without potential cellular network access fees: (ii) automatically connect to a remote picture hosting service and cause an upload of one or more pictures stored in the non-volatile memory to the remote picture hosting service via the cellular interface, after receiving: (1) data from the cellular interface used by the controller to determine that the upload is allowed based on the selected upload option, (2) an indication that the system is connected to the internet via the cellular interface; and (3) an indication from the local memory that a user has elected an option to designate at least one picture from the group of pictures stored in the local memory to be uploaded to the remote picture hosting service”</p> <p>Claims 1–4 and 16 of the ’761 Patent</p>	<p>Not 112 ¶6. Plain and ordinary meaning.</p>	<p>Subject to §112, ¶ 6, indefinite under §112, ¶ 2.</p> <p>Functions: (i) receive, via the touch sensitive display, a user selection of an upload option that instructs the device to confine automatic picture upload to periods without potential cellular network access fees: (ii) automatically connect to a remote picture hosting service and cause an upload of one or more pictures stored in the non-volatile memory to the remote picture hosting service via the cellular interface, after receiving: (1) data from the cellular interface used by the controller to determine that the upload is allowed based on the selected upload option, (2) an indication that the system is connected to the internet via the cellular interface; and (3) an indication from the local memory that a user has elected an option to designate at least one picture from the group of pictures stored in the local memory to be uploaded to the remote picture hosting service”</p>

<sup>3</sup> The asserted claims of the ’462 Patent recite “a controller . . . configured to . . .” whereas the asserted claims of the ’761 Patent recite “a controller configured to . . .” I typically refer to these terms as “a controller configured to . . .” as short-hand.



Claim Term/Phrase	CEV's Proposed Construction	T-Mobile's Proposed Construction
		Structure: No structure disclosed sufficient for performing the functions claimed
<p>“(f) a controller . . . configured to: (i) receive, via the touch sensitive display, a user selection of an upload option that instructs the camera system to confine automatic picture upload to periods without potentially increased cellular network access fees; (ii) automatically connect to a picture hosting service that is internet based and enable an upload to the picture hosting service, over the internet and via the cellular interface, of a group of image sensor-captured pictures stored in the local memory, during any period detected by the controller in which all three of the following conditions are met: (1) the upload is allowed because the system is within one of the periods without potentially increased cellular network access fees, as determined using data from the cellular interface, (2) the system is connected to the internet via the cellular interface; and (3) at least one image sensor-captured picture stored in the local memory has been designated through the touch sensitive display as part of the group of pictures to be uploaded to the picture hosting service.”</p> <p>Claims 1 and 2 of the '472 Patent</p>	Not 112 ¶6. Plain and ordinary meaning.	<p>Subject to §112, ¶ 6, indefinite under §112, ¶ 2.</p> <p>Functions: (i) receive, via the touch sensitive display, a user selection of an upload option that instructs the camera system to confine automatic picture upload to periods without potentially increased cellular network access fees; (ii) automatically connect to a picture hosting service that is internet based and enable an upload to the picture hosting service, over the internet and via the cellular interface, of a group of image sensor-captured pictures stored in the local memory, during any period detected by the controller in which all three of the following conditions are met: (1) the upload is allowed because the system is within one of the periods without potentially increased cellular network access fees, as determined using data from the cellular interface, (2) the system is connected to the internet via the cellular interface; and (3) at least one image sensor-captured picture stored in the local memory has been designated through the touch sensitive display as part of the group of pictures to be uploaded to the picture hosting service.”</p> <p>Structure: No structure disclosed sufficient for performing the functions claimed</p>

Claim Term/Phrase	CEV's Proposed Construction	T-Mobile's Proposed Construction
<p>“(f) a controller . . . configured to: (i) display on the touch sensitive display a user-selectable input that instructions the camera system to confine automatic picture upload to periods without potentially increased cellular network access fees; (ii) automatically connect to a picture hosting service that is internet-based and enable an upload to the picture hosting service, over the internet and via the cellular interface, of a group of image sensor-captured pictures stored in the local memory, during any period detected by the controller in which all the following conditions are met: (1) the controller has received from the display a selection of the user-selectable input that instructs the camera system to confine automatic picture uploads to periods without potentially increased cellular network access fees; (2) the controller has confirmed that the camera system is within a period without potentially increased cellular network access fees, as determined using data from the cellular interface; (3) the system has a connection to the internet via the cellular interface; and (4) at least one image sensor-captured picture stored in the local memory has been designated through the touch sensitive display as part of the group of image sensor-captured pictures to be uploaded to the picture hosting service.”</p> <p>Claims 5 and 6 of the '472 Patent</p>	<p>Not 112 ¶6. Plain and ordinary meaning.</p>	<p>Subject to §112, ¶ 6, indefinite under §112, ¶ 2.</p> <p>Functions: (i) display on the touch sensitive display a user-selectable input that instructions the camera system to confine automatic picture upload to periods without potentially increased cellular network access fees; (ii) automatically connect to a picture hosting service that is internet-based and enable an upload to the picture hosting service, over the internet and via the cellular interface, of a group of image sensor-captured pictures stored in the local memory, during any period detected by the controller in which all the following conditions are met: (1) the controller has received from the display a selection of the user-selectable input that instructs the camera system to confine automatic picture uploads to periods without potentially increased cellular network access fees; (2) the controller has confirmed that the camera system is within a period without potentially increased cellular network access fees, as determined using data from the cellular interface; (3) the system has a connection to the internet via the cellular interface; and (4) at least one image sensor-captured picture stored in the local memory has been designated through the touch sensitive display as part of the group of image sensor-captured pictures to be uploaded to the picture hosting service.”</p>

Claim Term/Phrase	CEV's Proposed Construction	T-Mobile's Proposed Construction
		Structure: No structure disclosed sufficient for performing the functions claimed

**A. Whether “Controller Configured To . . .” Should Be Treated as a Means-Plus-Function Term**

79. I understand that the parties dispute whether the term “controller configured to . . .” should be treated as a means-plus-function term.

80. I understand that because the term does not include the word “means” there is a rebuttable presumption that this term is not a “means-plus-function” term.

81. However, I understand that the absence of the word “means” from a particular term does not automatically prevent that term from being construed as a means-plus-function term. Rather, I understand that a term that does not recite “means” will be treated as a means-plus-function term if it is demonstrated the claim term recites function without reciting sufficient structure for performing that function.

82. As discussed further below, in my opinion, the claims fail to recite sufficient structure for performing the functions claimed for the “controller.” In my opinion, the term “controller” is used in the claims of the ’761 and ’472 Patents as a generic placeholder for any means that performs various specialized functions and should be treated as a means plus function term.

83. I have reviewed Dr. Hughes’ expert declaration concerning the term “controller” submitted in prior litigation against TCL (TMO\_CEV\_000028–88). Based on my review, Dr. Hughes does not disagree that the term fails to recite sufficient structure for performing the functions claimed. Dr. Hughes opines that the term “controller” has some structure, but he never

asserts it has the structure sufficient to perform the recited function. It is my understanding that a generic term, such as “controller” avoids means-plus-function treatment only if the claim recites a structure sufficient to perform the recited function.

**i. The asserted claims recite specialized functions**

84. I have reviewed the asserted claims of the ’462 and ’761 Patents, and it is my opinion that they require a “controller” to perform a number of specialized functions, including (1) confining automatic uploads of photos to particular periods when there are not potential cellular network access fees or potentially increased cellular network access fees; and (2) automatically connecting to a picture hosting website under the same conditions.

85. Here, the asserted claims identify the controller as “configured to” automatically connect and “confine” automatic picture upload to periods “without potential cellular network access fees” or “without potentially increased cellular network access fees.” I will refer to these as the “confining” functions.

86. Although there are slight variations in the claim language, as shown below, a POSITA would understand that in each of the asserted claims the controller is configured to confine automatic connection and automatic upload to any period without potential cellular network access fees or without potentially increased cellular network access fees.

Claims 1–4 and 16 of the ’761 Patent	Claims 1 and 2 of the ’472 Patent	Claims 5 and 6 of the ’472 Patent
“controller configured to . . . (ii) <b><i>automatically connect</i></b> to a remote picture hosting service <b><i>and cause an upload</i></b> . . . after receiving: (1) data from the cellular interface used by the controller to <b><i>determine that the upload is allowed based on the</i></b>	“controller . . . configured to . . . (ii) <b><i>automatically connect</i></b> to a picture hosting service . . . <b><i>and enable an upload . . . during any period detected by the controller in which</i></b> all three of the following conditions are met: (1) <b><i>the upload is</i></b>	“controller . . . configured to . . . (ii) <b><i>automatically connect</i></b> to a picture hosting service . . . <b><i>and enable an upload . . . during any period detected by the controller in which</i></b> all the following conditions are met: (1) the controller has

Claims 1–4 and 16 of the '761 Patent	Claims 1 and 2 of the '472 Patent	Claims 5 and 6 of the '472 Patent
<p><i>selected upload option</i>, (2) an indication that the system is connected to the internet via the cellular interface; and (3) an indication from the local memory that a user has elected an option to designate at least one picture from the group of pictures stored in the local memory to be uploaded to the remote picture hosting service”</p>	<p><i>allowed because the system is within one of the periods without potentially increased cellular network access fees</i>, as determined using data from the cellular interface, (2) the system is connected to the internet via the cellular interface; and (3) at least one image sensor-captured picture stored in the local memory has been designated through the touch sensitive display as part of the group of pictures to be uploaded to the picture hosting service.”</p>	<p>received from the display a selection of the user-selectable input that instructs the camera system to confine automatic picture uploads to periods without potentially increased cellular network access fees; (2) <i>the controller has confirmed that the camera system is within a period without potentially increased cellular network access fees</i>, as determined using data from the cellular interface; (3) the system has a connection to the internet via the cellular interface; and (4) at least one image sensor-captured picture stored in the local memory has been designated through the touch sensitive display as part of the group of image sensor-captured pictures to be uploaded to the picture hosting service.”</p>

87. Subsection (f)(i) of the asserted claims also confirms the controller confines upload to particular periods “without potential cellular network access fees” or “potentially increased cellular network access fees.” For example, claim 1 of the '761 patent recites “controller configured to: (i) receive, via the touch sensitive display, a user selection of an *upload option that instructs the device to confine automatic picture upload to periods without potential cellular network access fees.*”

88. Although there are slight variations in the claim language, as shown below, a POSITA would understand that the controller confines upload to particular periods.

Claims 1–4 and 16 of the '761 Patent	Claims 1 and 2 of the '472 Patent	Claims 5–6 of the '472 Patent	Claims 5–6 of the '472 Patent
“controller configured to . . . (i) receive, via the touch sensitive display, a user selection of an <i>upload option that instructs the device to confine automatic picture upload to periods without potential cellular network access fees</i> ”	“controller . . . configured to . . . (i) receive, via the touch sensitive display, a user selection of an <i>upload option that instructs the camera system to confine automatic picture upload to periods without potentially increased cellular network access fees</i> ”	“controller . . . configured to . . . (1) the controller has received from the display a selection of the user-selectable input that <i>instructs the camera system to confine automatic picture uploads to periods without potentially increased cellular network access fees</i> ”	“controller . . . configured to . . . (i) display on the touch sensitive display a user-selectable input that <i>instructs the camera system to confine automatic picture upload to periods without potentially increased cellular network access fees;</i> ”

89. The prosecution history supports my understanding that the controller performs the function of confining automatic connecting and upload to particular periods. During prosecution, the applicant argued that the prior art did not describe “the controller determining ‘the upload is allowed because the system is within one of the periods without potentially increased cellular network access fees’ and that the controller automatically enables upload of designated photos to the picture hosting service when this condition and other conditions are met.” *See* Remarks dated October 25, 2019 at 8 ('472 Patent File History).

90. A person of ordinary skill in the art would recognize these functions in element (f) of the asserted claims as functions because they are actions the controller must be programmed to perform.

91. The prosecution history further confirms that a POSITA would recognize the elements in section (f) of the asserted claims as performing the confining functions.

92. Specifically, the examiner rejected the claims under section 112—which I understand requires the alleged invention to be described in sufficient detail that a skilled artisan can reasonably conclude that the inventor had possession of it—asserting that “there is no disclosure of the touch sensitive display used to select an upload option or a user-selectable input related to upload periods.” *See* Remarks dated June 11, 2021. The applicants, in response, represented that the claims recite “upload functions” and “other functions”:

[T]he specification expressly instructs one skilled in the art to interact via touch technology with menus on the LCD to control camera features and **functions**. These Camera **functions** include automatic upload functions, as the touchscreen control is not described as being separate or excluded from other camera features.

...

Also, in Fig. 3 The LCD touchscreen display 42 is shown as an input to the camera controller 40 that handles “other camera control” 50. In other words, Fig. 3 shows the interconnection between the LCD touchscreen input and “other” **functions**, such as upload **functions**.

Remarks dated June 11, 2021 (emphasis added) (’472 Patent File History) (emphasis supplied by me).

93. I also note that the specification confirms that the elements in claim (f) are functions. For example, the specification refers to the camera system as being “**operable** for being instructed to ***automatically initiate a connection to the internet . . . whenever the predetermined conditions are met,***” and is “**operable** so that the automatic connection is made only at certain times of day or weekends, etc., so as to confine picture transmission to periods of low network usage or periods of cheaper network access, etc.” ’472 Patent at 12:62–13:3 (underlining and emphasis supplied by me); *id.* at 13:3–16; *see also* Remarks dated June 11, 2021 (’472 Patent File

History) at 4. A POSITA would understand that reciting that a system is “operable” for or “so as to” signals a function of that system.

94. Thus, in my opinion, the limitations in element (f) of the asserted claims discussed above are “functions.” As I discuss further below, the claims do not recite a structure for performing the recited functions.

**ii. The patentee relied on the functions of the controller as the purported inventive portion of the claims to distinguish the prior art**

95. My review of the prosecution history further shows that the applicants repeatedly relied on the functions of the “controller” as the purportedly inventive portion of the claims because they were what distinguished the alleged invention from prior art.

96. For example, on February 8, 2018, the applicant amended the claims pending in the application leading to the ’761 Patent “to include allowable subject matter” from another application (Application No. 15/188,736). These amendments focused on adding the limitation that the automatic connection and automatic upload were confined to periods “without potential cellular network access fees” as shown below:



21. (Currently Amended) A camera system comprising:

- (a) a lens;
- (b) a ~~WIFI-cellular~~ interface;
- (c) an image sensor configured to take pictures;
- (d) a non-volatile ~~local~~ memory configured to store one or more pictures;
- (e) a touch sensitive display; ~~configured to display:~~
  - ~~(1) a user-selectable menu option to designate one or more pictures stored in the non-volatile memory to be uploaded to a remote picture hosting service; and~~
  - ~~(2) a user-selectable menu option to enable a controller to automatically connect to the remote picture hosting service and upload designated pictures stored in the non-volatile memory via the WIFI interface;~~
- (f) the ~~a~~ controller configured to:
  - ~~(i) receive, via the touch sensitive display, a user selection of an upload option that instructs the device to confine automatic picture upload to periods without potential cellular network access fees;~~
  - ~~(ii) automatically connect to the a remote picture hosting service and cause an upload of one or more pictures stored in the non-volatile memory to the remote picture hosting service via the WIFI-cellular interface, after predetermined conditions are met; the predetermined conditions including receiving:~~
    - ~~(1) data from the cellular interface used by the controller to determine that the upload is allowed based on the selected upload option, an indication that the menu options of elements (e)(1) and (e)(2) have been enabled; and~~
    - ~~(2) an indication that the system is connected to the internet via the WIFI-cellular interface; and~~

~~(3) an indication from the local memory that a user has elected an option to designate at least one picture from the group of pictures stored in the local memory to be uploaded to the remote picture hosting service.~~

~~(g) a wireless cellular interface;~~

~~(h) the touch-sensitive display further configured to display a user-selectable menu option to enable the controller to automatically connect to the remote picture hosting service and upload designated pictures stored in the non-volatile memory via the wireless cellular interface;~~

~~(i) the controller further configured to automatically connect to the remote picture hosting service and cause an upload of one or more pictures stored in the non-volatile memory to the remote picture hosting service via the wireless cellular interface, after predetermined conditions are met, the predetermined conditions including receiving:~~

~~(1) an indication that the menu options of elements (e)(i) and (h) have been enabled;~~

~~and~~

~~(2) an indication that the system is connected to the internet via the wireless cellular interface.~~

23. (Previously Presented) The camera system of claim 21 wherein the remote picture hosting service is associated with an email account.

24. (Previously Presented) The camera system of claim 21 further comprising:

(g) a voice recognizer (1) coupled to and configured to receive and process sounds transduced by at least one microphone, and (2) configured to recognize one or more words associated with an operation for the camera;

(h) the controller further configured to cause the camera to perform the operation associated with the one or more words recognized by the voice recognizer.

25. (Previously Presented) The camera system of claim 21, wherein the remote picture hosting service includes printing services.

37. (Currently Amended) The camera system of claim ~~30-21~~ wherein the controller is configured to cause uploaded pictures to thereafter be transmitted to another party, ~~receive a selection of specific pictures stored in the non-volatile memory to be uploaded to the remote picture hosting service.~~

97. The applicant also relied on the same confining functions of the “controller . . . configured to” to argue for allowance of the claims that issued in the ’472 Patent. For example, the applicant submitted remarks on October 25, 2019, arguing that the limitations of element (f)(i) and (f)(ii) of original claims 21 and 25 were allowable over the prior art:

In this preliminary amendment, Applicant has amended the title of the invention and the specification to cross-reference related applications. Applicant has also amended the drawings to show the features of the invention specified in the claims. In the claims, Applicant cancels claims 1 – 20 and adds new claims 21 – 28 (2 independent claims and 6 dependent claims).

Independent claims 21 and 25 are in condition for allowance for at least the same reasons that the Examiner recently issued the claims of related U.S. Patent Nos. 9,936,116 and 10,063,761 in this family. For example, claim 21 element (f)(i) recites:

“a controller... configured to... receive, via the touch sensitive display, a user selection of *an upload option that instructs the camera system to confine automatic picture upload to periods without potentially increased cellular network access fees.*”

(emphasis added). And claim 21 (f)(ii) recites:

“a controller... configured to... *automatically connect to a picture hosting service that is internet-based and enable an upload to the picture hosting service*, over the internet and via the cellular interface, of a group of image sensor-captured pictures stored in the local memory, during *any period detected by the controller in which all three of the following conditions are met*:

(1) the upload is allowed because the system is within one of the periods without potentially increased cellular network access fees, as determined using data from the cellular interface,

(2) the system is connected to the internet via the cellular interface; and

(3) at least one image sensor-captured picture stored in the local memory has been designated through the touch sensitive display as part of the group of pictures to be uploaded to the picture hosting service.”

(emphasis added). Elements (f)(i) and (f)(ii) of independent claim 25 include similar limitations.

98. The applicant further argued that “none of the references of record discloses or suggests “an upload option that instructs the camera system to confine automatic picture uploads to periods without potentially increased cellular network access fees.” *See* October 25, 2019 Remarks. Applicant also argued that “none of the references describes, as a condition for upload, that the controller determines, “the upload is allowed because the system is within one of the periods without potentially increased cellular network access fees, as determined using data from

the cellular interface” and that “the controller automatically enables upload of designated photos to the picture hosting service when this condition and the other conditions are met.” *Id.*

99. The applicant continued to rely on the confining functions in element (f) of the claims to distinguish the prior art, including in various remarks accompanying information disclosure statements. For example, in one exemplary set of remarks on October 25, 2019, the applicant argued:

None of the references of record discloses or suggests ‘an upload option that instructs the camera system to confine automatic picture upload to periods without potentially increased cellular network access fees.’ ***Furthermore, none of the references describes, as a condition for upload, that the controller determines ‘the upload is allowed because the system is within one of the periods without potentially increased cellular network access fees, as determined using data from the cellular interface’ and that the controller automatically enables upload of designated photos to the picture hosting service when this condition and the other conditions are met.*** Thus, all of the pending claims are in condition for allowance for at least the same reasons that the Examiner recently issued the claims of the ‘116 and ‘761 patents in this family.

IDS and Remarks dated October 24, 2019; *see also* IDS and Remarks dated September 29, 2020; IDS and Remarks dated August 27, 2020.

100. A POSITA reviewing the prosecution history, including the excerpts discussed above, would know that the claims were only allowed with the addition of the confining functions in element (f) in the asserted claims.

**iii. The “controller configured to . . .” does not provide sufficient structure for performing the purportedly novel functions of the claims**

101. As discussed above, the claims recite a “controller configured to . . .” perform various functions. As discussed further below, based on the intrinsic record, a POSITA would understand that the “controller” is used as a substitute for any generic means that can perform the purportedly novel functions claimed.

102. The claims themselves confirm that the controller is used as a substitute for any means that can perform the allegedly novel functions. The claims themselves simply identify a “controller configured to . . .” perform various allegedly novel functions. A POSITA would understand that a “controller” without more cannot perform such allegedly novel functions.

103. The specification confirms that controller is used as a substitute for any means that can perform the allegedly novel functions. At best, the specification repeats or re-states the same functional language in the claims without identifying structure known to a POSITA as sufficient to perform the functions. It never describes how the “controller” is “configured to” perform the functions claimed. Most notably, there is no description of how any controller automatically connects or enables an upload during periods “without potential cellular network access fees” or “without “potentially increased cellular network access fees.” There is no description of how any controller is configured to determine whether there will be “potentially increased cellular network access fees” or “potential cellular network access fees.” Although inputs are described in the claims (such as “data from the cellular network” and “instruct[ions]”), inputs are not sufficient to perform the recited function. The patent is technologically silent as to how the “controller” is “configured” to perform any of the purportedly inventive functions.

104. Furthermore, the specification uses the term “controller” in the broadest sense. It discusses various different types of controllers, such as a “camera controller,” “device controller,” “ipod controller,” touchpad “controller,” game “controller,” and “joystick-like controller.” From the specification, a POSITA would understand that the term “controller” is a non-specific and generic term that encompasses anything that allows for control of a device. It refers to anything that allows for actions or inputs.

105. For example, the specification discusses a “camera controller” (primarily in relation to voice recognition):

- “In yet another novel embodiment of this aspect of the invention, the multiple microphones are preferably associated with multiple voice recognition units or, alternatively, with different voice recognition algorithms well known in the art. The outputs of these multiple voice recognition units or different voice recognition algorithms are then coupled to the *camera controller* (FIG. 3 element 40). The *camera controller* preferably *selects one of these outputs as being the camera controller's voice recognition input*. Alternatively, the *camera controller accepts the outputs of all the voice recognition units or algorithms and preferably uses a voting scheme to determine the most likely recognized command*.” ’472 Patent at 3:57–4:2 (emphasis added).
- “To illustrate this embodiment using the example of the camera system having microphones on its frontside and backside given above, each of these microphones is coupled to a voice recognition unit. When an utterance is received, each voice recognition unit recognizes the utterance. The *camera controller then selects which voice recognition unit's recognition to accept*. This is preferably based on the energy received by each microphone using circuitry similar to FIG. 2. Alternatively, the selection of which voice recognition unit to use would be a static selection. *Additionally, both recognizers' recognition would be considered by the camera controller* with conflicting results resolved by voting or using ancillary information (such as microphone energy content).” ’472 Patent at 4:9–22 (emphasis added).
- “An embodiment using multiple algorithms preferably has one *voice recognition* algorithm associated with the frontside microphone and, a different voice recognition algorithm associated with the backside microphone. Preferably, the voice recognition algorithm associated with the frontside microphone is adapted to recognize vocalizations uttered from afar (owing to this microphone probably being used in self-portraits), while the voice recognition algorithm associated with the backside microphone is optimal for closely uttered vocalizations. Selection of which algorithm is to be used as the *camera controller* input is preferably as above. Alternatively, as above, the selection would be by static selection or both applied to the *camera controller* and a voting scheme used to resolve discrepancies. While the above example contemplates using different voice recognition algorithms, there is no reason this must be so. The same algorithms could also be used in which case this example functions the same as multiple voice recognition units.” ’472 Patent at 4:23–40 (emphasis added).
- “Preferably, when recognizing a vocalization, the *cell phone controller* programming would also include the step of *determining if the recognized vocalization was for camera control, or for dialing*. Such determination would preferably be by reserving certain recognized keywords to be associated with camera functions (e.g., snap, shoot, etc).” ’472 Patent at 13:67–14:5 (emphasis added).

106. The specification likewise discusses a touchpad “controller” in relation to known touchpad technology:

- “Another aspect of the present invention adds touchpad technology to the prior art camera system. Use of the word ‘touchpad’ throughout this disclosure should be construed to mean either the touchpad itself or the *touchpad* with any or all of a *controller*, software, associated touchpad electronics, etc. This touchpad technology is similar to the touchpad mouse pad used on laptop computers which is also well understood in the computer art. In a first preferred embodiment, the EVF (or LCD display) displays the menus as above and the user moves the cursor or mouse pointer around this image by use of his finger on the touchpad.” ’472 Patent at 9:32–42 (emphasis added).

107. The specification also discusses known joystick-like controllers, game controllers, and iPod controllers, which confirms that controller is not necessarily used even to refer to a microprocessor or other integrated circuit:

- “Additionally, the touchpad, covered by a solid overlay with cutouts, would be recessed below the upper surface of the overlay (by as much as desired) helping to minimize false touches. This would be a much cheaper input gathering structure and would replace some or all of the many buttons and *joystick-like controller* of the cell phone, Ipod, camera, etc.” ’472 Patent at 15:56–62 (emphasis added).
- “Tapping and gesture (i.e., a finger stroke) recognition would further extend this new input-gathering device capability but is not required. This new input-gather device can be used to replace all or some of the buttons or *joystick-like controllers* on cell phones, portable electronic devices, cordless phones, mp3 players, PDAs, cameras, calculators, point of sales terminals, computers, computer monitors, *game controllers*, radio, stereos, TV, DVD players, set-top boxes, remote controls, automobile interfaces, appliances, household switches light and appliance switches, etc.” ’472 Patent at 16:4–15 (emphasis added).
- “Returning to the Ipod example, because of the large memory currently available with the Ipod, it is also contemplated that a digital camera, similar to cell phone's camera be embedded in the Ipod and coupled to the *Ipod controller* and this inventive Ipod be operable for taking pictures and storing the pictures in the Ipod's memory.” ’472 Patent at 16:26–32 (emphasis added).

108. The specification also discusses a “device controller” for use with the touchpad:

- “With reference to FIG. 5, in another embodiment, the *touchpad*, 94, is further contemplated to be fitted with a solid overlay having 2 or more cutouts over its surface (the solid overlay with cutouts is preferably part of the cell phone or other device's



housing and alternatively, the solid overlay, **90**, with cutouts, **92**, is applied to the touchpad surface separately) that only allows for certain areas of the touchpad to actually be touched to assist the user in assuring that only certain well-defined areas of the touchpad are touched. This greatly reduces the software detection requirements for the touchpad interface software since now the software need only detect when a certain defined area is touched and assigns a specific function to that touched area and reports that to the *device controller*.” ’472 Patent at 15:31–45 (emphasis added).

109. When the specification begins discussing a controller for communicating pictures over the internet, it discusses the use of undisclosed “wireless interface technology” and “software and hardware” as shown below. This further confirms that the “controller” is used broadly generally to include any means that can be programmed to perform the functions claimed.

- “In a first preferred embodiment of this aspect of the invention, the camera system is internally equipped with *wireless interface technology* by a wireless interface to the *camera controller for interfacing* directly to a photo printer or other photo rendering device.” ’472 Patent at 12:7–11 (emphasis added).
- “In a second preferred embodiment of this aspect of the invention, the inventive camera system is equipped with *software and hardware* coupled to the *camera controller* allowing independent communication with a computer network for the primary purpose of communicating its pictures over the internet. Currently preferred is WIFI which is typically connected by LAN, routers, etc. to the internet and which usually allows WIFI-equipped devices to independently connect to the internet (FIG. 3, element 46c). Alternatively, the invention contemplates the use of wired LAN, cellular data networks, etc. as the interconnection technology (FIG. 3, element 46b) used by the inventive camera system. The inventive camera system is further preferably equipped with a microbrowser that runs on the inventive camera system’s *camera controller* which is preferably a microprocessor. It is contemplated that some embodiments may not be required a microbrowser (see enhancement below). Design and operation of microbrowser-equipped electronic devices for use with the internet is well known in the art and need not be discussed further. The camera system LCD display serves the purpose of displaying internet webpages when the user is navigating the internet in addition to its function as the camera display. So equipped, the inventive camera system can now independently upload its pictures to any of the internet-based photo printing services, such as those provided by Walmart.com, Walgreens.com, Kodak.com, etc., without the need for first storing the photos to a computer system and then connecting the computer system to the internet to upload the pictures. Use of these internet services for printing photos is preferred by many over use of a home photo printer because of the convenience, ease, availability, quality and lower per-picture printing costs. Providing the novel combination of a high photo quality camera system with direct access to the internet according to this aspect of the present invention will further



improve the utility of the camera system and these services.” ’472 Patent at 12:26–61 (emphasis added).

110. For the “automatically connect” functions, the specification repeats or re-states a variation of the functions claimed without identifying any structure known to a POSITA as sufficient to perform the functions:

- “In the second embodiment above, the inventive camera system ***automatically connects*** to the internet preferably via WIFI, although cellular network, etc. connection is also contemplated, when it has a predetermined number of pictures and can so connect, and will send the pictures to virtually any internet destination without user intervention. For example, the inventive camera system can be instructed to ***automatically send*** the pictures to an email account, internet picture hosting site (FIG. 3, element 46d), web-based photo printing site, the user's internet-connected home computer (when he is on vacation, for instance), etc. In this way, valuable pictures are immediately backed-up and the need for reliance on expensive camera storage media like flash cards, SD, etc. is greatly reduced.” ’472 Patent at 13:16–30 (emphasis added).
- “It is further contemplated that certain aspects of the presently disclosed invention have application beyond those disclosed herein. . . As an example, ***automatically connecting*** to the internet when a set of predetermined rules or conditions (such as time, date, status of equipment, etc) is met would be useful for the download/upload of information from/to the internet, like music, video, etc. for processing, storage, transmission to another party, etc.” ’472 Patent at 16:49–63 (emphasis added).
- “In an enhancement to the above-disclosed embodiments of this aspect of the invention, the inventive camera system is operable for being instructed to ***automatically initiate a connection*** to the internet, LAN, printer, etc. whenever the predetermined conditions are met and it is in range of the network connection, (e.g., WIFI, Bluetooth, wireless USB, wired LAN, etc). Once the transmittal of the pictures is complete, the inventive camera system preferably terminates the connection.” ’472 Patent at 12:62–13:3 (emphasis added).
- “Additionally, other aspects of the present invention taught for the improved camera system are applicable to the improved cell phone herein disclosed particularly the aspect of the present invention associating multiple different utterances to a single command. The aspect of the invention ***allowing for automatic connection*** to a LAN or the internet is also contemplated for use with cell phone cameras. This aspect of the invention ameliorates the prior art storage space limitation which severely hampers the utility of the cell phone camera. Cellular service providers typically charge a fee for internet access or emailing and so an automatic feature to connect to the net or send email for the purposes of transmitting pictures can improve revenue generation for these companies.” ’472 Patent at 14:28–41 (emphasis added).

- “Additionally, the inventive camera system is preferably operable so that the ***automatic connection*** is made only at certain times of the day or weekends, etc., so as to confine picture transmission to periods of low network usage or periods of cheaper network access, etc. Also, it is currently preferred that the user be queried to allow the automatic connection though this is obviously not required and the connection can be made completely autonomously. Thus, in the first embodiment above, the inventive camera system ***automatically sends*** its pictures to a printer or other device on the LAN for printing or for remotely storing the pictures in the inventive camera system, whenever the inventive camera system is in range of the LAN network connection and connection can be made.” ’472 Patent at 13:3–16 (emphasis added).

111. The specification never identifies any algorithm for determining the status of network charges and automatically uploading. For uploading, the specification merely discusses use of a “microbrowser.” ’472 patent at 12:38–61. A browser is software that allows a user to visit a website or other location on a computer or the internet. It is not an algorithm *for* confining uploads to specific periods or automatic connection and/or automatic upload. Nor does it allow automatic connections and upload when certain conditions are met. Further, the patent recognizes that “Design and operation of microbrowser-equipped electronic devices for use with the internet is well known in the art and need not be discussed further.” *Id.* at 12:36-39. A POSITA would understand that this disclosure of micro-browsers that were well-known in the art would only allow a user to visit a location on the Internet and would ***not*** perform the purportedly inventive functions claimed. Such micro-browsers are not structures that correspond to the recited functions.

112. As further confirmation that the “controller” is a generic “means” for performing the claimed functions, Figure 3 depicts the “camera controller” 40 as a labeled generic box and box 50 labeled “Other Camera Controls.”

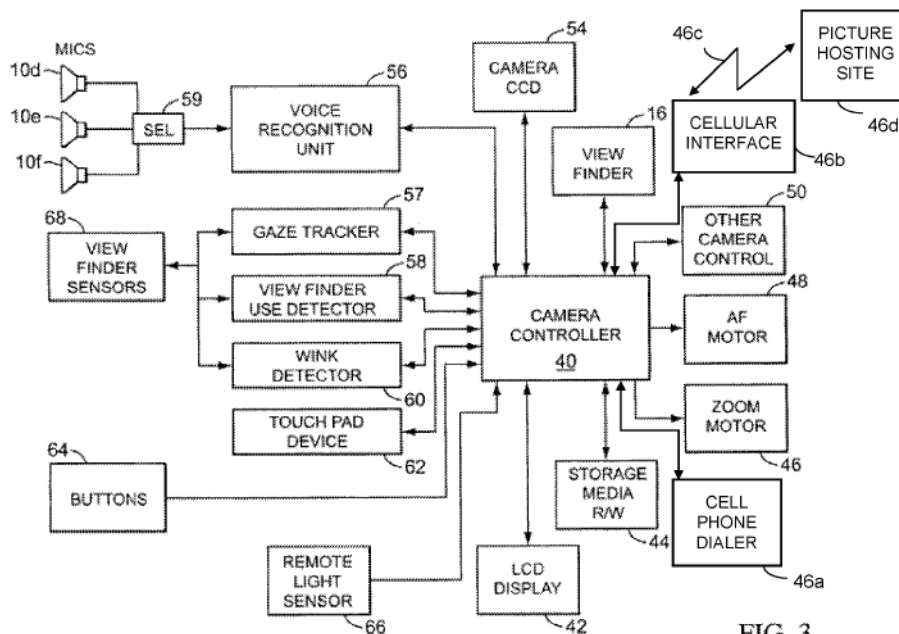


FIG. 3

'472 Patent at Fig. 3.

113. The file history further supports my view that the “controller” in the claims is used as any means for performing the claimed functions. During prosecution of the application leading to the '761 Patent, on November 24, 2015, the applicant provided a chart with “representative support” in the specification for the pending claims. At the time, the claims recited a “controller” and “controller configured to . . .”, but the applicant focused on the *functions* of the camera system to support the claims without disclosure of the structure that might perform such functions:

(2) a user-selectable menu option to enable a controller to automatically connect to the remote picture hosting service and upload designated pictures stored in the non-volatile memory via the WIFI interface;	<p><i>See, e.g., 12:6-38: “[T]he inventive camera system is operable for being instructed to automatically initiate a connection to the internet, LAN, printer, etc. whenever the predetermined conditions are met and it is in range of the network connection, (e.g., WIFI, Bluetooth, wireless USB, wired LAN, etc.)...[T]he inventive camera system automatically connects to the internet preferably via WIFI, although cellular network, etc. connection is also contemplated, when it has a predetermined number of pictures and can so connect, and will send the pictures to virtually any internet destination without user intervention. For example, the inventive camera system can be instructed to automatically send the pictures to an email account, internet picture hosting site, web-based photo printing site, the user’s internet-connected home computer (when he is on vacation, for instance), etc. In this way, valuable pictures are immediately backed-up and the need for reliance on expensive camera storage media like flash cards, SD, etc. is greatly reduced.”</i></p> <p><i>See also, e.g., 6:37-41: “This aspect of the present invention allows the user to interact with menus, features and functions displayed on the LCD display directly rather than through ancillary buttons or cursor control.”</i></p>
(f) the controller configured to automatically connect to the remote picture hosting service and cause an upload of one or more pictures stored in the non-volatile memory to the remote picture hosting service via the WIFI interface, after predetermined conditions are met, the predetermined conditions including receiving: (1) an indication that the menu options of elements (e)(1) and (e)(2) have been enabled; and (2) an indication that the system is connected to the internet via the WIFI	<p><i>See, e.g., 12:6-38: “[T]he inventive camera system is operable for being instructed to automatically initiate a connection to the internet, LAN, printer, etc. whenever the predetermined conditions are met and it is in range of the network connection, (e.g., WIFI, Bluetooth, wireless USB, wired LAN, etc.)...[T]he inventive camera system automatically connects to the internet preferably via WIFI, although cellular network, etc. connection is also contemplated, when it has a predetermined number of pictures and can so connect, and will send the pictures to virtually any internet destination without user intervention. For example, the inventive camera system can be instructed to automatically send the pictures to an email account, internet picture hosting site, web-based photo printing site, the user’s internet-connected home computer (when he is on vacation, for instance), etc. In this way, valuable pictures are immediately backed-up and the need for reliance on expensive camera storage media like flash cards, SD, etc. is greatly reduced.”</i></p> <p><i>See also, e.g., 11:38-64: “[T]he inventive camera system is equipped with software and hardware coupled to the camera controller allowing independent communication with a computer network for the primary purpose of communicating its pictures over the internet. Currently preferred is WIFI which is typically connected by LAN, routers, etc. to the internet and which usually allows WIFI-equipped de-</i></p>
interface.	<p>vices to independently connect to the internet....So equipped, <i>the inventive camera system can now independently upload its pictures to any of the internet-based photo printing services, such as those provided by Walmart.com, Walgreens.com, Kodak.com, etc., without the need for first storing the photos to a computer system and then connecting the computer system to the internet to upload the pictures.</i>”</p>

<p>(h) the touch sensitive display further configured to display a user-selectable menu option to enable the controller to automatically connect to the remote picture hosting service and upload designated pictures stored in the non-volatile memory via the wireless cellular interface;</p>	<p><i>See, e.g., 12:6-38: “[T]he inventive camera system is operable for being instructed to automatically initiate a connection to the internet, LAN, printer, etc. whenever the predetermined conditions are met and it is in range of the network connection, (e.g., WIFI, Bluetooth, wireless USB, wired LAN, etc.)...[T]he inventive camera system automatically connects to the internet preferably via WIFI, although <b>cellular network, etc. connection is also contemplated</b>, when it has a predetermined number of pictures and can so connect, and will send the pictures to virtually any internet destination without user intervention. For example, the inventive camera system <b>can be instructed to automatically</b> send the pictures to an email account, <b>internet picture hosting site, web-based photo printing site</b>, the user’s internet-connected home computer (when he is on vacation, for instance), etc. In this way, valuable pictures are immediately backed-up and the need for reliance on expensive camera storage media like flash cards, SD, etc. is greatly reduced.”</i></p>
<p>(i) the controller further configured to automatically connect to the remote picture hosting service and cause an upload of one or more pictures stored in the non-volatile memory to the</p>	<p><i>See, e.g., 12:6-38: “[T]he inventive camera system is operable for being instructed to automatically initiate a connection to the internet, LAN, printer, etc. whenever the predetermined conditions are met and it is in range of the network connection, (e.g., WIFI, Bluetooth, wireless USB, wired LAN, etc.)...[T]he inventive camera system automatically connects to the internet preferably via WIFI, although <b>cellular network, etc. connection is also contemplated</b>, when it has a predetermined number of pictures and can so connect, and will</i></p>
<p>remote picture hosting service via the wireless cellular interface, after predetermined conditions are met, the predetermined conditions including receiving: (1) an indication that the menu options of elements (e)(1) and (h) have been enabled; and (2) an indication that the system is connected to the internet via the wireless cellular interface.</p>	<p>send the pictures to virtually any internet destination without user intervention. For example, the inventive camera system can be instructed to automatically send the pictures to an email account, <b>internet picture hosting site, web-based photo printing site</b>, the user’s internet-connected home computer (when he is on vacation, for instance), etc. In this way, valuable pictures are immediately backed-up and the need for reliance on expensive camera storage media like flash cards, SD, etc. is greatly reduced.”</p> <p><i>See also, e.g., 11:38-64: “[T]he inventive camera system is equipped with software and hardware coupled to the camera controller allowing independent communication with a computer network for the primary purpose of communicating its pictures over the internet. Currently preferred is WIFI which is typically connected by LAN, routers, etc. to the internet and which usually allows WIFI-equipped devices to independently connect to the internet. Alternatively, the invention contemplates the use of wired LAN, <b>cellular data networks</b>, etc. as the interconnection technology used by the inventive camera system.....So equipped, <b>the inventive camera system can now independently upload its pictures to any of the internet-based photo printing services, such as those provided by Walmart.com, Walgreens.com, Kodak.com, etc., without the need for first storing the photos to a computer system and then connecting the computer system to the internet to upload the pictures.</b>”</i></p>

<p>27. The camera system of claim 21, wherein the controller is further configured with a picture editor for creating and storing a picture sequence file in the non-volatile memory, the picture sequence file comprising:</p> <ul style="list-style-type: none"> <li>(1) a first picture taken with the image sensor and stored in the non-volatile memory;</li> <li>(2) a second picture taken with the image sensor and stored in the non-volatile memory;</li> <li>(3) data from a sound file downloaded via the WIFI</li> </ul>	<p><i>See, e.g., 12:44-54:</i> “According to this aspect of the invention, the inventive camera records a series of images, (e.g., a movie) and then the user downloads an MP3 file (i.e., a sound file) from a network (e.g., internet) source to be associated with the movie taken so that when the movie is played, the MP3 file also plays. Alternatively, the MP3 content is embedded in the movie, either as is, or re-encoded. Additionally, the user may download other movie material or still images via the network connection for insertion in the camera-recorded movie or for the replacement of certain individual camera-taken “frames” in the movie.”</p>
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<p>interface and stored in the non-volatile memory.</p>	
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<p>28. The camera system of claim 27, wherein the controller is further configured to upload the picture sequence file to the remote picture hosting service via the WIFI interface</p>	<p><i>See, e.g., 15-48-51:</i> “Internet connectability is contemplated be used to download sound or image files for editing or for uploading video recorded for editing or remote storage of the video images.”</p>
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<p>28. The camera system of claim 27, wherein the controller is further configured to upload the picture sequence file to the remote picture hosting service via the WIFI interface</p>	<p><i>See, e.g., 15-48-51:</i> “Internet connectability is contemplated be used to download sound or image files for editing or for uploading video recorded for editing or remote storage of the video images.”</p>
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(2) a user-selectable menu option to enable a controller to automatically connect to the remote picture hosting service and upload designated pictures stored in the non-volatile memory; and	<p><i>See, e.g., 12:6-38: “[T]he inventive camera system is operable for being instructed to automatically initiate a connection to the internet, LAN, printer, etc. whenever the predetermined conditions are met and it is in range of the network connection, (e.g., WIFI, Bluetooth, wireless USB, wired LAN, etc.)...[T]he inventive camera system automatically connects to the internet preferably via WIFI, although cellular network, etc. connection is also contemplated, when it has a predetermined number of pictures and can so connect, and will send the pictures to virtually any internet destination without user intervention. For example, the inventive camera system <b>can be instructed to automatically</b> send the pictures to an email account, <b>internet picture hosting site, web-based photo printing site</b>, the user’s internet-connected home computer (when he is on vacation, for instance), etc. In this way, valuable pictures are immediately backed-up and the need for reliance on expensive camera storage media like flash cards, SD, etc. is greatly reduced.”</i></p> <p><i>See also, e.g., 6:37-41: “This aspect of the present invention allows the user to interact with menus, features and functions displayed on the LCD display directly rather than through ancillary buttons or cursor control.”</i></p>
(f) the controller configured to:	<p><i>See, e.g., 12:6-38: “[T]he inventive camera system is operable for being instructed to automatically initiate a connection to the in-</i></p>



<p>(1) automatically connect to the remote picture hosting service and cause an upload of one or more pictures stored in the non-volatile memory to the remote picture hosting service via one of the two or more network interfaces, after predetermined conditions are met, the predetermined conditions including receiving:</p> <p>(i) an indication that the menu options of elements (c)(1) and (c)(2) have been enabled; and</p> <p>(ii) an indication that the system is connected to the internet via at least one of the two or more network interfaces; and</p>	<p>internet, LAN, printer, etc. <i>whenever the predetermined conditions are met and it is in range of the network connection</i>, (e.g., <i>WIFI</i>, Bluetooth, wireless USB, wired LAN, etc)...[T]he inventive camera system automatically connects to the internet <i>preferably via WIFI, although cellular network, etc. connection is also contemplated</i>, when it has a predetermined number of pictures and can so connect, and will send the pictures to virtually any internet destination without user intervention. For example, the inventive camera system can be instructed <i>to automatically</i> send the pictures to an email account, <i>internet picture hosting site, web-based photo printing site</i>, the user's internet-connected home computer (when he is on vacation, for instance), etc. In this way, valuable pictures are immediately backed-up and the need for reliance on expensive camera storage media like flash cards, SD, etc. is greatly reduced."</p> <p><i>See also, e.g., 11:38-64: "[T]he inventive camera system is equipped with software and hardware coupled to the camera controller allowing independent communication with a computer network for the primary purpose of communicating its pictures over the internet. Currently preferred is WIFI which is typically connected by LAN, routers, etc. to the internet and which usually allows WIFI-equipped devices to independently connect to the internet. Alternatively, the invention contemplates the use of wired LAN, cellular data networks, etc. as the interconnection technology used by the inventive camera system....So equipped, the inventive camera system can now independently upload its pictures to any of the internet-based photo printing services, such as those provided by Walmart.com, Walgreens.com, Kodak.com, etc., without the need for first storing the photos to a computer system and then connecting the computer system to the internet to upload the pictures."</i></p>
<p>(2) cause the upload to occur via the WIFI interface if the system is connected to the internet via both the WIFI interface and the wireless cellular interface.</p>	<p><i>See, e.g., 12:26-31: "[T]he inventive camera system automatically connects to the internet preferably via WIFI, although cellular network, etc. connection is also contemplated, when it has a predetermined number of pictures and can so connect, and will send the pictures to virtually any internet destination without user intervention."</i></p> <p><i>See also, e.g., 11:42-47: "Currently preferred is WIFI which is typically connected by LAN, routers, etc. to the internet and which usually allows WIFI-equipped devices to independently connect to the internet. Alternatively, the invention contemplates the use of wired LAN, cellular data networks, etc. as the interconnection technology used by the inventive camera system."</i></p>
<p>35. The camera system of claim 30, wherein the</p>	<p><i>See, e.g., 12:44-54: "According to this aspect of the invention, the inventive camera records a series of images, (e.g., a movie) and</i></p>



controller is further configured with a picture editor for creating and storing a picture sequence file in the non-volatile memory, the picture sequence file comprising: (1) a first picture taken with the image sensor and stored in the non-volatile memory; (2) a second picture taken with the image sensor and stored in the non-volatile memory; (3) data from a sound file downloaded via one of the two or more interfaces and stored in the non-volatile memory.	then the user downloads an MP3 file (i.e., a sound file) from a network (e.g., internet) source to be associated with the movie taken so that when the movie is played, the MP3 file also plays. Alternatively, the MP3 content is embedded in the movie, either as is, or re-encoded. Additionally, the user may download other movie material or still images via the network connection for insertion in the camera-recorded movie or for the replacement of certain individual camera-taken "frames" in the movie."
36. The camera system of claim 35, wherein the controller is further configured to upload the picture sequence file to the remote picture hosting service via one of the two or more interfaces.	<i>See, e.g., 15-48-51: "Internet connectability is contemplated be used to download sound or image files for editing or for uploading video recorded for editing or remote storage of the video images."</i>
37. The camera system of claim 30 wherein the controller is configured to receive a selection of specific pictures stored in the non-volatile memory to be uploaded to the remote picture hosting service.	<i>See, e.g., 11:15-18: "The camera system preferably includes the ability for the user to indicate to the camera which pictures to offload so that the camera offloads only those pictures that are so indicated by the user."</i>
(2) a user-selectable menu option to enable a controller to automatically connect to the remote	<i>See, e.g., 12:6-38: "[T]he inventive camera system is operable for being instructed to automatically initiate a connection to the internet, LAN, printer, etc. whenever the predetermined conditions are met and it is in range of the network connection, (e.g., WIFI, Blue-</i>

<p>picture hosting service and upload designated pictures stored in the non-volatile memory via at least one of the network interfaces;</p>	<p>tooth, wireless USB, wired LAN, etc.)....[T]he inventive camera system automatically connects to the internet preferably via WIFI, although cellular network, etc. connection is also contemplated, when it has a predetermined number of pictures and can so connect, and will send the pictures to virtually any internet destination without user intervention. For example, the inventive camera system <i>can be instructed to automatically</i> send the pictures to an email account, <i>internet picture hosting site, web-based photo printing site</i>, the user's internet-connected home computer (when he is on vacation, for instance), etc. In this way, valuable pictures are immediately backed-up and the need for reliance on expensive camera storage media like flash cards, SD, etc. is greatly reduced.”</p> <p><i>See also, e.g., 6:37-41: “This aspect of the present invention allows the user to interact with menus, features and functions displayed on the LCD display directly rather than through ancillary buttons or cursor control.”</i></p>
<p>(3) a user-selectable menu option to enable the controller to automatically connect to a home computer and upload designated pictures stored in the non-volatile memory via the WIFI interface; and</p>	<p><i>See, e.g., 12:6-38: “[T]he inventive camera system is operable for being instructed to automatically initiate a connection to the internet, LAN, printer, etc. whenever the predetermined conditions are met and it is in range of the network connection, (e.g., WIFI, Bluetooth, wireless USB, wired LAN, etc.)....[T]he inventive camera system automatically connects to the internet preferably via WIFI, although cellular network, etc. connection is also contemplated, when it has a predetermined number of pictures and can so connect, and will send the pictures to virtually any internet destination without user intervention. For example, the inventive camera system can be instructed to automatically</i> send the pictures to an email account, <i>internet picture hosting site, web-based photo printing site, the user's internet-connected home computer</i> (when he is on vacation, for instance), etc. In this way, valuable pictures are immediately backed-up and the need for reliance on expensive camera storage media like flash cards, SD, etc. is greatly reduced.”</p> <p><i>See also, e.g., 6:37-41: “This aspect of the present invention allows the user to interact with menus, features and functions displayed on the LCD display directly rather than through ancillary buttons or cursor control.”</i></p>
<p>(f) the controller configured to (1) automatically connect to the remote picture hosting service and cause an upload of one or more pictures stored in the non-volatile memory to the remote picture hosting service via at least one of</p>	<p><i>See, e.g., 12:6-38: “[T]he inventive camera system is operable for being instructed to automatically initiate a connection to the internet, LAN, printer, etc. whenever the predetermined conditions are met and it is in range of the network connection, (e.g., WIFI, Bluetooth, wireless USB, wired LAN, etc.)....[T]he inventive camera system automatically connects to the internet preferably via WIFI, although cellular network, etc. connection is also contemplated, when it has a predetermined number of pictures and can so connect, and will send the pictures to virtually any internet destination without user intervention. For example, the inventive camera system can be instruct-</i></p>

<p>the network interfaces, after predetermined conditions are met, the predetermined conditions including at least receiving:</p> <p>(i) an indication that the menu options of elements (e)(1) and (e)(2) have been enabled;</p> <p>(ii) an indication that the system is connected to the internet via either of the network interfaces to the remote picture hosting service;</p>	<p>ed <i>to automatically</i> send the pictures to an email account, <i>internet picture hosting site, web-based photo printing site</i>, the user's internet-connected home computer (when he is on vacation, for instance), etc. In this way, valuable pictures are immediately backed-up and the need for reliance on expensive camera storage media like flash cards, SD, etc. is greatly reduced."</p> <p><i>See also, e.g., 11:38-64: "[T]he inventive camera system is equipped with software and hardware coupled to the camera controller allowing independent communication with a computer network for the primary purpose of communicating its pictures over the internet. Currently preferred is WIFI which is typically connected by LAN, routers, etc. to the internet and which usually allows WIFI-equipped devices to independently connect to the internet. Alternatively, the invention contemplates the use of wired LAN, cellular data networks, etc. as the interconnection technology used by the inventive camera system.....So equipped, the inventive camera system can now independently upload its pictures to any of the internet-based photo printing services, such as those provided by Walmart.com, Walgreens.com, Kodak.com, etc., without the need for first storing the photos to a computer system and then connecting the computer system to the internet to upload the pictures."</i></p>
<p>(2) automatically connect to the home computer and cause an upload of one or more pictures stored in the non-volatile memory to the home computer via the WIFI interface, after predetermined conditions are met, the predetermined conditions including at least receiving:</p> <p>(i) an indication that the menu options of elements (e)(1) and (e)(3) have been enabled;</p> <p>(ii) an indication that the system is connected to the home computer via the WIFI interface.</p>	<p><i>See, e.g., 12:6-38: "[T]he inventive camera system is operable for being instructed to automatically initiate a connection to the internet, LAN, printer, etc. whenever the predetermined conditions are met and it is in range of the network connection, (e.g., WIFI, Bluetooth, wireless USB, wired LAN, etc.)....[T]he inventive camera system automatically connects to the internet preferably via WIFI, although cellular network, etc. connection is also contemplated, when it has a predetermined number of pictures and can so connect, and will send the pictures to virtually any internet destination without user intervention. For example, the inventive camera system can be instructed to automatically send the pictures to an email account, internet picture hosting site, web-based photo printing site, the user's internet-connected home computer (when he is on vacation, for instance), etc. In this way, valuable pictures are immediately backed-up and the need for reliance on expensive camera storage media like flash cards, SD, etc. is greatly reduced."</i></p>

114. In addition, the applicant's statements during prosecution explain that purported invention was *not* confining uploads to particular times—which the applicant recognized the prior art disclosed. I rely, in particular, on the Information Disclosure Statement and Remarks dated October 24, 2019, at 9 ('472 Patent File History.) Instead, the alleged invention required the device to make a determination whether there would be increased costs for upload. *Id.* A POSITA would understand that receiving the information from the network necessary to make that determination,

such as a subscriber's plan information, and making that determination requires implementation of an algorithm that is not disclosed.

115. I have read the prior declarations of CEV's expert, Dr. Hughes, and I understand that he agrees that a "controller" is nothing more than a generic device. In some places, he asserts that a controller is "a device or group of devices that controls the operation of other components of the system." Hughes Decl. at ¶ 36. He also provides various dictionary definitions illustrating that a "controller" is a generic component for controlling. *Id.* at ¶ 45. A device for controlling other components is not a structure known to a POSITA to perform the purportedly novel confining functions recited in the claims, which include the requirement that the device determine the instances in which there would not be "potential cellular access fees" or "potentially increased cellular network access fees," confine uploads to those periods, and ensure that uploads occur automatically in such situations.

116. CEV's expert opines that the term "controller" refers to a "microprocessor." *Id.* at ¶ 38. As discussed above, it is my opinion that the term "controller" is used more generically than the term "microprocessor." For example, the patent refers to joysticks, touchpads, and other structures as controllers. *See, e.g.,* '472 Patent at 15:56–62, 16:8–14, 9:32–37. A joystick or touchpad is not a microprocessor.

117. But, even if "controller" were limited to a "microprocessor," at best, an off the shelf conventional "microprocessor" could not perform the allegedly novel functions claimed without specific programming and a specified algorithm, neither of which is identified.

118. Dr. Hughes' opinions demonstrate that known processors cannot perform the recited functions through his discussion of the Sensory RSC-164 chip and other chips discussed in his declaration, such as the RSC-164i. Hughes Decl. at ¶¶ 41–42. As Dr. Hughes recognizes, these

were prior art chips that were used for cameras with voice recognition capabilities. There is no discussion, and a POSITA would not understand those chips, to have inherent ability to perform the functions recited in the asserted claims.

119. A POSITA would understand that the purportedly novel functions attributed to the controller are not functions that are typically performed by a general-purpose computer or microprocessor, including the specific chips Dr. Hughes identifies. In particular, the asserted claims describe functions of confining automatic uploading to a particular period and automatically connecting to a network if the recited conditions exist. These functions would require specific specialized programming to, for example (1) “automatically connect” to a picture hosting service during periods “without cellular network access fees” or “without potentially increased cellular network access fees” and (2) automatically enable or cause an upload to the picture hosting site during periods “without cellular network access fees” or “without potentially increased cellular network access fees.” A general purpose computer or microprocessor can only perform limited functions (such as receiving data, storing data, and processing data) and could not perform these functions without specialized programming that is not disclosed.

120. Dr. Hughes also points to “touch sensitive display, the non-volatile memory, the cellular interface.” Hughes Decl. at ¶ 49. But A POSITA would likewise recognize that these do not constitute an algorithm of any kind and this hardware is not sufficient to perform the recited functions.

121. For the reasons set forth above, it is my opinion that the “controller” “configured to” is used as a generic term and, in the context of the claims, specification, and file history, would not be understood by a POSITA to have sufficient structure to perform the claimed functions and should therefore be construed as means-plus function terms.

**B. Whether There Is a Corresponding Structure For Each Function Claimed**

122. I understand that a means-plus-function claim element is not definite unless there is a disclosed “corresponding structure” that performs each claimed function. I understand that where there are multiple claimed functions, there must be adequate corresponding structures to perform *all* of the claimed functions.

123. I have reviewed the specification of the Asserted Patents, and my opinion is that the Asserted Patents do not describe any algorithm or algorithms for performing each of the functions of the controller claimed.

124. The asserted claims identify the functions of the controller as “configured to” confine the automatic upload of pictures—over a cellular network—to periods of time “without potential cellular network access fees” (’761 Patent, Claim 1) or “without potentially increased cellular network access fees” (’472 Patent, Claims 1 & 5); and (2) automatically connect to a picture hosting service “without potential cellular network access fees” or “without potentially increased cellular network access fees.” (’472 Patent at claims 1–2, 5–6; ’761 Patent at claims 1–4, 16).

125. But the specification provides no description of how a controller would be configured to perform any of these claimed functions. There’s no description of how to implement these functions recited by the claims, including how the controller would process specialized inputs to perform their functions, or how the controller would generate control signals to perform the functions.

126. For example, during prosecution, the applicant emphasized that its invention is different because, in the prior art, the device relied on particular times of day (such as nights and weekends) for downloads. The alleged invention was different because the device determined from

the network whether there was a potentially increased network access fee and confined uploads to a period when such fees were not in force. That functionality requires an algorithm that is completely missing from the specification.

127. There is also no algorithm related to the function of displaying or receiving any input that instructs the camera system to **confine** automatic picture upload to periods without potentially increased cellular network access fees or without potential cellular network access fees. There is no disclosure concerning how the controller is configured to display or receive input that instructs the camera system to **confine** automatic picture uploads to periods of time without potentially increased cellular network access fees or potential cellular network access fees.

128. The patent also describes known touch-screen technology ('472 Patent at 9:32–55, 10:15–19) and explains that “[t]ouch commands input by the user would be coupled back to the camera system as needed.” ’472 Patent at 7:48–49. It also explains that “[t]his touchpad technology is similar to the touchpad mouse pad used on laptop computers which is also well understood in the computer art. ’472 Patent at 9:37–39. But a POSITA would know that the recited touchpad technology is not sufficient to perform the functions that CEV identified as the point of novelty for its alleged invention.

129. The specification refers to “automatically connecting” but simply re-states the claim language (or slight variations), including that the system “automatically connects,” is “automatically connecting,” “automatically sends,” “automatically initiate[s] a connection,” “allow[s] for automatic connection,” and is “operable so that the automatic connection is made”:

- “In the second embodiment above, the inventive camera system **automatically connects** to the internet preferably via WIFI, although cellular network, etc. connection is also contemplated, when it has a predetermined number of pictures and can so connect, and will send the pictures to virtually any internet destination without user intervention. For example, the inventive camera system can be instructed to **automatically send** the pictures to an email account, internet picture hosting site (FIG.



3, element 46d), web-based photo printing site, the user's internet-connected home computer (when he is on vacation, for instance), etc. In this way, valuable pictures are immediately backed-up and the need for reliance on expensive camera storage media like flash cards, SD, etc. is greatly reduced.” ’472 Patent at 13:16–30 (emphasis added).

- “It is further contemplated that certain aspects of the presently disclosed invention have application beyond those disclosed herein. . . . As an example, ***automatically connecting*** to the internet when a set of predetermined rules or conditions (such as time, date, status of equipment, etc) is met would be useful for the download/upload of information from/to the internet, like music, video, etc. for processing, storage, transmission to another party, etc.” ’472 Patent at 16:49–63 (emphasis added).
- “In an enhancement to the above-disclosed embodiments of this aspect of the invention, the inventive camera system is operable for being instructed to ***automatically initiate a connection*** to the internet, LAN, printer, etc. whenever the predetermined conditions are met and it is in range of the network connection, (e.g., WIFI, Bluetooth, wireless USB, wired LAN, etc). Once the transmittal of the pictures is complete, the inventive camera system preferably terminates the connection.” ’472 Patent at 12:62–13:3 (emphasis added).
- “Additionally, other aspects of the present invention taught for the improved camera system are applicable to the improved cell phone herein disclosed particularly the aspect of the present invention associating multiple different utterances to a single command. The aspect of the invention ***allowing for automatic connection*** to a LAN or the internet is also contemplated for use with cell phone cameras. This aspect of the invention ameliorates the prior art storage space limitation which severely hampers the utility of the cell phone camera. Cellular service providers typically charge a fee for internet access or emailing and so an automatic feature to connect to the net or send email for the purposes of transmitting pictures can improve revenue generation for these companies.” ’472 Patent at 14:28–41 (emphasis added).
- “Additionally, the inventive camera system is preferably operable so that the ***automatic connection*** is made only at certain times of the day or weekends, etc., so as to confine picture transmission to periods of low network usage or periods of cheaper network access, etc. Also, it is currently preferred that the user be queried to allow the automatic connection though this is obviously not required and the connection can be made completely autonomously. Thus, in the first embodiment above, the inventive camera system ***automatically sends*** its pictures to a printer or other device on the LAN for printing or for remotely storing the pictures in the inventive camera system, whenever the inventive camera system is in range of the LAN network connection and connection can be made.” ’472 Patent at 13:3–16 (emphasis added).

130. A controller does not automatically connect to anything absent specialized software and algorithms. A POSITA would not recognize any of the above statements to be an algorithm



for performing any of the claimed functions. The specification does not identify any algorithm for “automatically connecting . . .” and a POSITA would know that “automatically connecting . . .” requires programming and is not something a generic processor can do without programming or logic designed to perform that function.

131. The specification recognizes that there would need to be “wireless interface technology” “software” or “hardware” or a “microbrowser” that are not disclosed in sufficient detail for a POSITA to implement. ’472 Patent at 12:4–41. I understand that even if a POSITA could write software to allow for automatic connection, that is not a sufficient disclosure to satisfy the definiteness requirements of 35 U.S.C. § 112(2). But a recitation of “software or hardware,” a “microbrowser” or “wireless interface technology” does not supply functionality that can automatically connect and perform the allegedly novel functions in element (f) of the asserted claims.

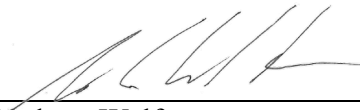
132. There is also a disclosure in Fig. 3 of a generic “camera controller” box “40” and another generic box “50” labeled “Other Camera Control.” But there is no identification of any algorithm or logic that can perform the functions claimed. A box diagram, like generic “wireless interface technology,” “microbrowser” technology, or “software and hardware” discussed above, provides no structure at all and is certainly not sufficient to perform the recited functions.

133. I have reviewed Dr. Hughes’ declaration, and he has not identified any algorithm that would instruct the “controller” to perform the claimed functions. Hughes Declaration at ¶ 49. He only points to the reference to the “microprocessor” in the specification, the fact that the claims recite other structural components, such as ‘a touch sensitive delay, memory, and a cellular interface, and the reference to the RSC-164 chip for voice recognition. None of these structures are known to a POSITA to perform the purportedly novel functions in the claims.

134. In my opinion, a person of ordinary skill in the art would be unable to recognize any structure in the specification for “controller” and associate that structure with the corresponding function. The recited function cannot be performed by a general-purpose computer without special programming and/or additional specialized hardware. Dr. Hughes does not identify any disclosure of any algorithm for carrying out the recited function, and in my review of the patent specification, I do not believe that a person of ordinary skill in the art would be able to identify disclosure of any algorithm to perform these functions.

I declare under penalty of perjury under the laws of the United States of America that to the best of my knowledge the foregoing is true and correct.

Dated: February 27, 2025



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Dr. Andrew Wolfe

**EXHIBIT A**

**to the**

**EXPERT DECLARATION OF DR. ANDREW WOLFE**

## Andrew Wolfe Ph.D.

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Santa Clara, CA 95050  
(408) 394-1096 (mobile)  
Email: awolfe@awolfe.org

### Education:

Ph.D. in Electrical and Computer Engineering, Carnegie Mellon University, 1992  
Visiting Graduate Student, Center for Reliable Computing, Stanford University, 1988-1989  
M.S. in Electrical and Computer Engineering, Carnegie Mellon University, 1987  
B.S.E.E. in Electrical Engineering and Computer Science, The Johns Hopkins University, 1985

### Recent Employment:

Lecturer, Asst. Teaching Professor [September 2013-present]

#### **Santa Clara University**

Teaching graduate and undergraduate courses on embedded computing, mechatronics, real-time systems, computer architecture, design, and community service. Faculty Senate President 2023-24.

Consultant, [October 2002-present]

#### **Wolfe Consulting**

Consultant on processor technology, computer systems, consumer electronics, software, design tools, and intellectual property issues. Testifying and consulting expert for IP and other technology-related litigation matters.

Sample clients include:

Google	Apple	Samsung
Sony	Huawei	HTC
AT&T	Verizon Mobile	T-Mobile
IBM	Motorola/Lenovo	Nintendo
Activision	AMD	Western Digital
Sonos	Qualcomm	LG
Netflix	Roku	Tivo
Synaptics	Sawstop	3M
Medigus	TCL	ZTE
Egnyte	Acer	Waymo

Chief Technical Officer, [1999-2002]; Sr. VP of Business Development, [2001-2002]; VP, Systems Integration, S3 Fellow, [1998 – 1999]; Director of Technology, S3 Fellow, [1997 - 1998]

**SONIC|blue, Inc**, Santa Clara, CA (formerly S3 Inc.)

### **Strategic Business Development:**

Developed and implemented strategy to reposition S3 from PC graphics into the leading networked consumer electronics company.

- Acquired Diamond Multimedia and coordinated integration of communications, Rio digital music, and workstation graphics divisions into S3.
- Identified and negotiated acquisitions to grow digital media businesses including Empeg, ReplayTV, and Sensory Science.
- Identified and negotiated strategic investments including Comsilica, Intellon, KBGear Interactive, Entridia, DataPlay and others.

- Developed strategy for integrated graphics/core-logic products and established a joint venture with Via Technologies to design and market these products.
- Negotiated divestiture of graphics chip business to Via and the workstation graphics division to ATI.

**Product Planning and Development:**

- Drove roadmap development within SONICblue product divisions.
- Managed Business Development for all product lines.
- Led New Product Development and Corporate Vision processes.
- Acting co-General Manager of Rio digital music business in 2<sup>nd</sup> half of 2001. Responsible for all areas of product development, business development, and cost management.
- Managed development of the Savage/MX and Savage/IX mobile 3D graphics accelerators and Savage/NB system logic products.

**Public Relations, Public Policy and Investor Relations:**

- Present company products and strategy at industry events such as CES, Comdex, and Microprocessor Forum.
- Discuss new products and initiatives with the press.
- Promote issues of interest to SONICblue to industry groups and in Washington.
- Brief analysts, and investors on company progress. Participate in quarterly conference calls.

**IP Management and Licensing:**

- Negotiated and managed partnership agreements including a critical cross-licensing agreement with Intel.
- Renegotiated technology-licensing agreements with IBM for workstation graphics products.
- Evaluated outside technology opportunities, managed video research and development, and managed corporate IP strategy with legal staff including patent filings, cross licensing, and litigation.

Consulting Professor, [1999-2002]

**Stanford University**, Stanford, CA

Teaching computer architecture and microprocessor design.

Assistant Professor [1991 - 1997]

**Princeton University**, Princeton, NJ

Teaching and research in the Electrical Engineering department. Research in embedded computing systems, multimedia, video signal processors, compiler optimization, and high performance computer architecture. Principal investigator or project manager for ~\$6M in funded research.

Visiting Assistant Professor, [1992]

**Carnegie Mellon University**, Pittsburgh, PA

Research and preparation of teaching materials on advanced microprocessor designs including new superscalar and superpipelined processor architectures.

Founder and Vice President and Consultant, [1989 - 1995]

**The Graphics Technology Company, Inc.**, Austin, TX

Founded company to develop touch-sensitive components and systems for the first generation of PDA devices and interactive public systems. Obtained financing from Gunze Corp., Osaka, Japan. Company is now part of 3M.

Senior Electrical Engineer, [1989]

**ESL - TRW, Advanced Technology Division**, Sunnyvale, CA

Designed the architecture for an Intel i860-based multiple-processor digital signal processing system for advanced military applications. Designed several FPGA interface chips for VME-bus systems.

Design Consultant, [1986 -1987]

**Carroll Touch Division, AMP Inc.**, Round Rock, TX

Developed several new technologies for touch-screen systems. Designed the first ASIC produced for AMP, a mixed-signal interface chip for controlling touch-screen sensors. Developed the system electronics, system firmware, and customer utility software for numerous products including those based on the new ASIC.

Senior Design Engineer, [1983 -1985]

**Touch Technology Inc.**, Annapolis, MD

**Advisory Boards:**

Director, Turtle Beach Corporation (NASDAQ:HEAR) (formerly Parametric Sound Corporation), KBGear Interactive, Inc., Comsilica, Inc., Rioport.com, various S3 subsidiaries.

Technical Advisory Boards, Ageia, Inc., Intellon, Inc., Comsilica, Inc., Entridia, Inc., Siroyan, Ltd., BOPS, Inc, Quester Venture Funds

Carnegie Mellon University Silicon Valley Advisory Board; Johns Hopkins University Tech Transfer Advisory Board

**Awards:**

IEEE Fellow - for contributions in hardware code compression of embedded software, power consumption analysis, and optimization, 2022

IEEE Computer Society Distinguished Contributor - 2021

Micro Test-of-Time Award (in recognition of one of the ten most influential papers of the first 25 years of the symposium), 2014

Business 2.0 “20 Young Executives You Need to Know”, 2002

Walter C. Johnson Prize for Teaching Excellence, 1997.

Princeton University Engineering Council Excellence in Teaching Award, Spring 1996

AT&T/Lucent Foundation Research Award, 1996.

Walter C. Johnson Prize for Teaching Excellence, 1995

IEEE Certificate of Appreciation, 1995, 2001.

AT&T Foundation Research Award, 1993.

Semiconductor Research Corporation Fellow, 1986 - 1991.

Burroughs Corporation Fellowship in Engineering, 1985 - 1986.

**Professional Activities:**

Program Chair: Micro-24, 1991, Hot Chips 13, 2001.

General Chair: Micro-26, 1993, Micro-33, 2000.

Associate Editor: IEEE Computer Architecture Letters; ACM Transactions in Embedded Computing Systems

Speaker at CES, WinHec, Comdex, Intel Dev. Forum, Digital Media Summit, Microprocessor Forum, etc.

Keynote speaker at Micro-34, ICME 2002

IEEE B. Ramakrishna Rau Award committee – 2012-2016

IEEE Computer Society Awards Committee – 2015

Director – IEEE Consultants Network of Silicon Valley – 2022-present

CES Awards Judge – 2016

Entrepreneurship Mentor – Draper University

**Over 50 refereed publications.**

**Publications since January 2006:**

Wolfe, A., “Retrospective on Code Compression and a Fresh Approach to Embedded Systems”, IEEE MICRO, July/Aug. 2016, Invited paper.

Michael Kreienkamp, Olivia McConaghy, Sally L. Wood, Andrew Wolfe, Julia A. Scott, 2024 NYC Neuromodulation Conference, Transcranial Photobiomodulation Control System Compatible with EEG, abstract and poster. June 2024 <https://neuromodec.org/nyc-neuromodulation-2024/poster-list.html#A83D>



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- U.S. Pat. 5,438,168 – *Touch Panel*, Aug. 1, 1995.
- U.S. Pat. 5,736,688 – *Curvilinear Linearization Device for Touch Systems*, Apr. 7, 1998.
- U.S. Pat. 6,037,930 – *Multimodal touch sensitive peripheral device*, March 14, 2000.
- U.S. Pat. 6,408,421 – *High-speed asynchronous decoder circuit for variable-length coded data*, June 18, 2002.
- U.S. Pat. 6,865,668 – *Variable-length, high-speed, asynchronous decoder circuit*, March 8, 2005
- U.S. Pat. 7,079,133 – *Superscalar 3D Graphics Engine*, July 18, 2006
- EP 1 661 131 B1 – *PORTABLE ENTERTAINMENT APPARATUS*, Jan. 21, 2009
- U.S. Pat. 7,555,006 – *Method and system for adaptive transcoding and transrating in a video network*, June 30, 2009
- U.S. Pat. 7,996,595 – *Interrupt Arbitration for Multiprocessors*, Aug. 9, 2011
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- U.S. Pat. 8,131,970 – *Compiler Based Cache Allocation*, March 6, 2012
- U.S. Pat. 8,180,963 – *Hierarchical read-combining local memories*, May 15, 2012
- U.S. Pat. 8,193,941 – *Snoring Treatment*, June 5, 2012
- U.S. Pat. 8,203,541 – *OLED display and sensor*, June 19, 2012
- U.S. Pat. 8,243,045 – *Touch-sensitive display device and method*, August 14, 2012
- U.S. Pat. 8,244,982 – *Allocating processor cores with cache memory associativity*, August 14, 2012
- U.S. Pat. 8,260,996 – *Interrupt Optimization for Multiprocessors*, Sept. 4, 2012
- 101185761 (KR) – *Noise Cancellation for Phone Conversation*, Sept. 19, 2012
- 101200740 (KR) – *OLED display and sensor*, November 7, 2012
- 101200741 (KR) – *Touch-sensitive display device and method*, November 7, 2012
- U.S. Pat. 8,321,614 – *Dynamic scheduling interrupt controller for multiprocessors*, Nov. 27, 2012
- U.S. Pat. 8,352,679 – *Selectively securing data and/or erasing secure data caches responsive to security compromising conditions*, Jan. 8, 2013
- U.S. Pat. 8,355,541 – *Texture Sensing*, Jan. 15, 2013
- U.S. Pat. 8,370,307 – *Cloud Data Backup Storage Manager*, Feb. 5, 2013
- U.S. Pat. 8,398,451 – *Tactile Input Interaction*, March. 19, 2013
- JP 5241032 B2 – *Routing Across Multicore Network Using Real World or Modeled Data*, April 13, 2013
- ZL201010124820.3 – *Interrupt Optimization for Multiprocessors*, April 17, 2013
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- U.S. Pat. 8,508,498 – *Direction and Force Sensing Input Device*, August 13, 2013
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- JP 5487307 B2 – *Mapping Of Computer Threads onto Heterogeneous Resources*, Feb. 28, 2014
- JP 5484580 B2 – *Task Scheduling Based on Financial Impact*, Feb. 28, 2014
- JP 5487306 B2 – *Cache Prefill on Thread Migration*, Feb. 28, 2014
- 101372623 (KR) – *Power Management for Processor*, March. 4, 2014
- 101373925 (KR) – *Allocating Processor Cores with Cache Memory Associativity*, March 6, 2014
- U.S. Pat. 8,676,668 – *Method for the determination of a time, location, and quantity of goods to be made available based on mapped population activity*, March 18, 2014
- U.S. Pat. 8,687,533 – *Energy Reservation in Power Limited Networks*, April 1, 2014
- 101388735 (KR) – *Routing Across Multicore Networks Using Real World or Modeled Data*, April 17, 2014
- U.S. Pat. 8,725,697 – *Cloud Data Backup Storage*, May 13, 2014
- U.S. Pat. 8,726,043 – *Securing Backing Storage Data Passed Through a Network*, May 13, 2014
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 U.S. Pat. 8,824,666 – *Noise Cancellation for Phone Conversation*, Sept. 2, 2014  
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 ZL201080035185.X – *Cache Prefill on Thread Migration*, Aug. 24, 2016  
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**Expert testimony by deposition or at trial – April 15, 2018 - -present**

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Joe Andrew Salazar v HTC Corporation	E.D. Texas	2:16-cv-010986-JRG-RSP
Hitachi Maxell, Ltd. v. ZTE Corporation and ZTE (USA), Inc.	E.D. Texas	5:16-cv-00179 5:16-cv-00178
INTER PARTES REVIEW OF U.S. PATENT NO. 7,663,506 (Mediatek v AMD)	PTAB	IPR2017-00101 IPR2017-00102
Papst Licensing GmbH & Co. KG v. Samsung Electronics Co.,Ltd. and Samsung Electronics America, Inc.	E.D. Texas	6:15-CV-1102
HTC Corporation v. Telefonaktiebolaget LM Ericsson	E.D. Texas	6: 18-cv-00243-JRG
Seven Networks, LLC v ZTE (USA) Inc and ZTE Corporation	N. D. Texas - Dallas	3:17-CV-1495
AGIS Software Development, LLC v. HTC Corporation	E. D. Texas	2:17-cv-514
Barbaro Technologies, LLC v. Niantic, Inc	N.D. CA	3:18-cv-02955-RS
Immersion Corp. v. Samsung Electronics America, Inc. et al	E.D. Texas	2:17-cv-00572
INTER PARTES REVIEW OF U.S. PATENT NO. 7,171,526 (Northstar Innovations – Micron)	PTAB	IPR2018-01004 IPR2018-01005
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